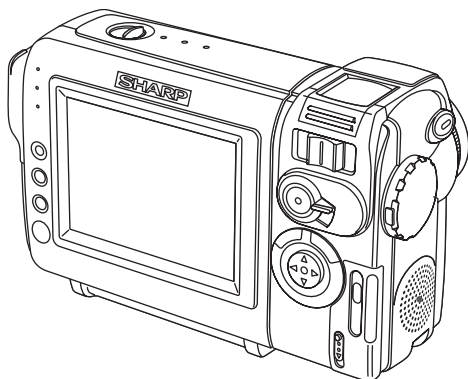


SHARP SERVICE MANUAL

S22F9VL-NZ50U

LIQUID CRYSTAL DIGITAL CAMCORDER NTSC



MODELS

VL-NZ50U VL-NZ100U VL-NZ150U

In the interests of user-safety (Required by safety regulations in some countries) the set should be restored to its original condition and only parts identical to those specified be used.

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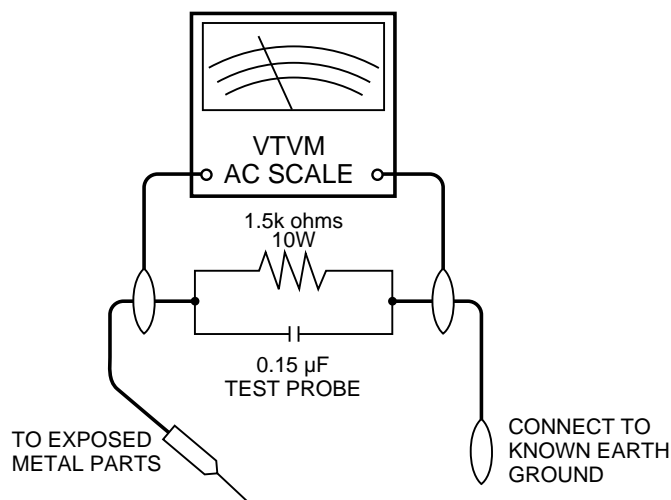
1. IMPORTANT SERVICE NOTES

BEFORE RETURNING THE VIDEO CAMERA RECORDER

Before returning the video camera recorder to the user, perform the following safety checks.

1. Inspect all lead dress to make certain that leads are not pinched or that hardware is not lodged between the chassis and other metal parts in the video camera recorder.
2. Inspect all protective devices such as non-metallic control knobs, insulating materials, cabinet backs, adjustment and compartment covers or shields, isolation resistor/capacitor networks, mechanical insulators etc.
3. To be sure that no shock hazard exists, check for leakage current in the following manner.
 - Plug the AC line cord directly into a 120 volt AC outlet (Do not use an isolation transformer for this test).
 - Using two clip leads, connect a 1.5k ohm, 10 watt resistor paralleled by a 0.15 μ F capacitor in series with all exposed metal cabinet parts and a known ground, such as a water pipe or conduit.
 - Use a VTVM or VOM with 1000 ohm per volt, or higher sensitivity or measure the AC voltage drop across the resistor (See Diagram).
 - Move the resistor connection to all exposed metal parts having a return path to the chassis (antenna

connections, metal cabinet, screw heads, knobs and control shafts, etc.) and measure the AC voltage drop across the resistor. Reverse the AC plug (a non polarized adaptor plug must be used but only for the purpose of completing these checks) on the set and repeat the AC voltage measurements for each exposed metallic part. Any reading of 0.45V rms (this corresponds to 0.3mA rms AC.) or more is excessive and indicates a potential shock hazard which must be corrected before returning the video camera recorder to the user.



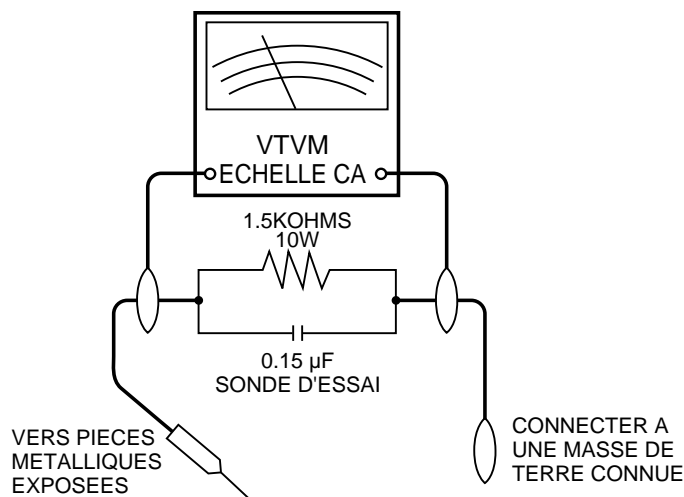
1. NOTES DE SERVICE IMPORTANTES

AVANT DE RENDRE LE MAGNETOSCOPE

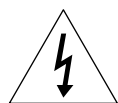
Avant de rendre le magnétoscope à l'utilisateur, effectuer les vérifications de sécurité suivantes.

1. Vérifier toutes les gaines de fil pour être sûr que les fils ne sont pas pincés ou que le matériel n'est pas coincé entre le châssis et les autres pièces métalliques dans le magnétoscope.
2. Vérifier tous les dispositifs de protection tels que les boutons de commande non métalliques, les matériaux d'isolement, le dos du coffret, les couvercles de compartiment et ajustement ou les boucliers, les réseaux de résistance / condensateur d'isolement, les isolateurs mécaniques, etc.
3. Pour être sûr qu'il n'y a aucun risque de choc électrique, vérifier le courant de fuite de la manière suivante.
 - Brancher le cordon d'alimentation secteur directement dans une prise de courant de 120 volts. (Ne pas utiliser de transformateur d'isolement pour cet essai).
 - Utiliser deux fils à pinces et connecter une résistance de 10 watts 1,5 kohm en parallèle avec un condensateur de 0,15 μ F en série avec des pièces du coffret métallique exposées et une masse de terre connue telle qu'un tuyau ou un conduit d'eau.
 - Utiliser un VTVM ou VOM avec une sensibilité de 1000 ohms par volt ou plus ou mesurer la chute de tension CA entre la résistance (voir diagramme).
 - Déposer la connexion de la résistance à toutes les pièces métalliques exposées ayant un parcours de

retour au châssis (connexions d'antenne, coffret métallique, têtes de vis, boutons et arbres de commande, etc.) et mesurer la chute de tension CA entre la résistance. Inverser la fiche CA (une fiche intermédiaire non polarisée doit être utilisée à seule fin de faire ces vérifications.) sur l'appareil et répéter les mesures de tension CA pour chaque pièce métallique exposée. Toute lecture de 0,45 V rms (ceci correspond à 0,3 mA rms CA) ou plus est excessive et signale un danger de choc qui doit être corrigé avant de rendre le magnétoscope à son utilisateur.



WARNING : TO REDUCE THE RISK OF FIRE OR ELECTRIC SHOCK, DO NOT EXPOSE THIS APPLIANCE TO WET LOCATIONS.



CAUTION

**RISK OF ELECTRIC SHOCK
DO NOT OPEN**



CAUTION: TO REDUCE THE RISK OF ELECTRIC SHOCK. DO NOT REMOVE COVER. NO USER-SERVICEABLE PARTS INSIDE. REFER SERVICING TO QUALIFIED SERVICE PERSONNEL.



This symbol warns the user of uninsulated voltage within the unit that can cause dangerous electric shocks.

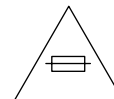


This symbol alerts the user that there are important operating and maintenance instructions in the literature accompanying this unit.

CAUTION

This symbol mark means following.
For continued protection against fire hazard, replace only with same type fuse.
(CP1; 1A 24V, CP2; 1A 24V)

Camcorder
only



ATTENTION: POUR REDUIRE LES RISQUES D'INCENDIE OU DE CHOC ELECTRIQUE, NE PAS EXPOSER CET APPAREIL A LA PLUIE OU A L'HUMIDITE.



ATTENTION

**RISQUE DE CHOC ELECTRIQUE
NE PAS OUVRIR**



ATTENTION: AFIN DE REDUIRE LES RISQUES DE CHOC ELECTRIQUE, NE PAS RETIRER LE COUVERCLE, AUCUN ORGANE INTERNE NE PEUT ETRE REPARÉ PAR L'UTILISATEUR, CONFIER L'APPAREIL A UN DEPANNEUR QUALIFIE.



Ce symbole signale à l'utilisateur la présence d'une tension non isolée à l'intérieur de l'appareil qui peut être la cause de secousses électriques dangereuses.

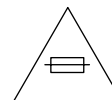


Ce symbole avertit l'utilisateur que des instructions importantes relatives à l'utilisation et à l'entretien se trouvent dans le manuel accompagnant l'appareil.

ATTENTION

Ce symbole signifie que l'on devra utiliser un fusible de même type (CP1; 1A 24V, CP2; 1A 24V) pour assurer la sécurité.

Camcorder
seulement



 **CAUTION**
BEFORE BATTERY DESTROY

■ NICKEL-CADMIUM BATTERY

The following program is available in the United States. Please consult local environmental authorities concerning the availability of this or other programs in your area.

The RBRC™ Seal

SHARP participates in the RBRC™* Nickel-Cadmium Battery Recycling Program in the United States. The RBRC™ Seal on our battery pack contained in our product indicates that SHARP is voluntarily participating in an industry program to collect and recycle these batteries. The RBRC™ program provides you with a convenient alternative to placing spent Nickel-Cadmium battery packs into the trash or municipal waste stream, which is illegal in some areas. At the end of their useful life, the Nickel-Cadmium battery can be dropped off at the nearest collection center for recycling. For information on the nearest collection center, call 1-800-8-BATTERY or your local recycling center. If you are located outside the United States, contact your local authorities for information concerning proper disposal and/or recycling of this battery. SHARP's involvement in this program is part of our commitment to protecting our environment and conserving natural resources.

[Footnote] *RBRC™ is trademark of the Rechargeable Battery Recycling Corporation.

■ NICKEL-METAL HYDRIDE BATTERY

■ LITHIUM or LITHIUM-ION BATTERY

■ SEALED LEAD BATTERY

Battery disposal

Contains the above (Rechargeable) Battery. must be recycled or disposed of properly.

Remove the Battery from the products and contact Federal or State Environmental Agencies for information on recycling and disposal options.

■ PRECAUTIONS FOR USING LEAD-FREE SOLDER

1) Employing lead-free solder

"Main PWB", "Camera head PWB", "Audio I/O PWB", "Card PWB", "Inverter PWB", "Operation PWB", "DC Jack PWB", "CCD PWB" of this model employs lead-free solder. The LF symbol indicates lead-free solder, and is attached on the PWBs and service manuals. The alphabetical character following LF shows the type of lead-free solder.

Example:

LFa
Sn-Ag-Cu

Indicates lead-free solder of tin, silver and copper

2) Using lead-free solder

When fixing the PWB soldered with the lead-free solder, apply lead-free wire solder. Repairing with conventional lead wire solder may cause damage or accident due to cracks.

As the melting point of lead-free solder (Sn-Ag-Cu) is higher than the lead wire solder by 40°C, we recommend you to use a dedicated soldering bit. If you are not familiar with how to obtain lead-free solder or soldering bit, contact our service station or service ranch in your area.

3) Soldering

As the melting point of lead-free solder (Sn-Ag-Cu) is 220°C which is higher than the conventional lead solder by 40°C, and as it has poor solderability, you may be apt to keep the soldering bit in contact with the PWB for extended period of time. However, since the land may be peeled off or the maximum heat-resistance temperature of parts may be exceeded, remove the bit from the PWB as soon as you confirm the steady soldering condition.

Lead-free solder contains more tin, and the end of the soldering bit may be easily corroded. Make sure to turn on and off the power of the bit as required.

If a different type of solder stays on the tip of the soldering bit, it is alloyed with lead-free solder. Clean the bit after every use of it.

When the tip of the soldering bit is blackened during use, file it with steel wool or fine sandpaper.

Lead-free wire solder for servicing

Part No.	★	Description	Price Code
ZHNDAi123250E	J	φ0.3mm 250g(1roll)	BL
ZHNDAi126500E	J	φ0.6mm 500g(1roll)	BK
ZHNDAi12801KE	J	φ1.0mm 1kg(1roll)	BM

2. SPECIFICATIONS

Signal System: NTSC standard
Recording System: 2 rotary heads, helical scanning system
Cassette: Digital VCR Mini DV video cassette
Recording/Playback Time: 90 minutes (DVM60, LP mode)
Tape Speed: SP mode: 18.812 mm/second
LP mode: 12.555 mm/second
Pickup Device: $\frac{1}{4}$ " (6.4 mm, effective size: 4.5 mm) CCD image sensor
(with approx. 460,000 pixels including optical black)
Lens: 10 × optical/300 × digital power zoom lens (F1.8, f=3.6-36.0 mm), full-range auto focus
Lens Filter Diameter: 27 mm
Monitor: 3" (7.5 cm) full-color LCD screen (TFT active matrix)
Microphone: Electret stereo microphone
Color Temperature Compensation: Auto white balance with white balance lock
Minimum Illumination: 1 lux (12 lux measured by EIA standard)(with gain-up, F1.8)
Still Image Compression System
(VL-NZ100U/NZ150U only): JPEG base line conformance
Still Image Recording Format
(VL-NZ100U/NZ150U only): JPEG (Exif2.1)
Still Image Recording Medium
(VL-NZ100U/NZ150U only): SD Memory Card, MultiMediaCard
Power Requirement: DC 7.4 V
Power Consumption: 4.3 W (during camera recording in Full Auto mode with zoom motor off and backlight normal mode)
Operating Temperature: 32°F to 104°F (0°C to +40°C)
Operating Humidity: 30% to 80%
Storage Temperature: -4°F to 140°F (-20°C to +60°C)
Dimensions (approx.): $5 \frac{9}{16}$ " (W) × $3 \frac{11}{32}$ " (H) × $2 \frac{5}{16}$ " (D)
[141.1 mm (W) × 85.1 mm (H) × 58.5 mm (D)]
Weight (approx.): VL-NZ50U: 1.01 lbs (460 g)
VL-NZ100U/NZ150U: 1.03 lbs (465 g)
(without battery pack, lithium battery, video cassette, lens cap, lens hood, wrist strap and card(VL-NZ100U/NZ150U only))

AC Adapter/Battery Charger(UADP-0339TAZZ)

Power Requirement: AC 110-240 V, 50/60 Hz
DC Output: 10 V
Dimensions (approx.): $1 \frac{31}{32}$ " (W) × $1 \frac{1}{16}$ " (H) × $2 \frac{19}{32}$ " (D)
[50mm (W) × 27.0mm (H) × 65.5 mm (D)]
Weight (approx.): 0.22 lbs (100 g)

SD Memory Card(VL-NZ100U/NZ150U only)

Memory Capacity: 8 MB(VL-NZ100U), 16MB(VL-NZ150U)
Power Requirement: 3 V
Operating Temperature: 32°F to 104°F (0°C to +40°C)
Storage Temperature: -4°F to 149°F (-20°C to +65°C)

Specifications are subject to change without notice.

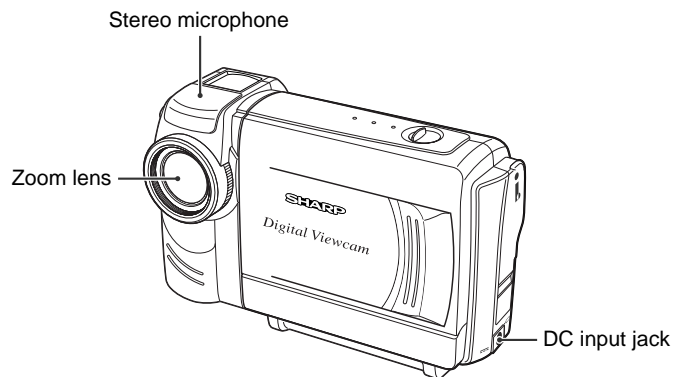
SERVICE INFORMATION (For the U.S.)

For the location of the nearest Sharp Authorized Service, or to obtain product literature, accessories, supplies or customer assistance, please call 1-800-BE SHARP (1-800-237-4277) or visit SHARP's website (<http://www.sharp-usa.com>)

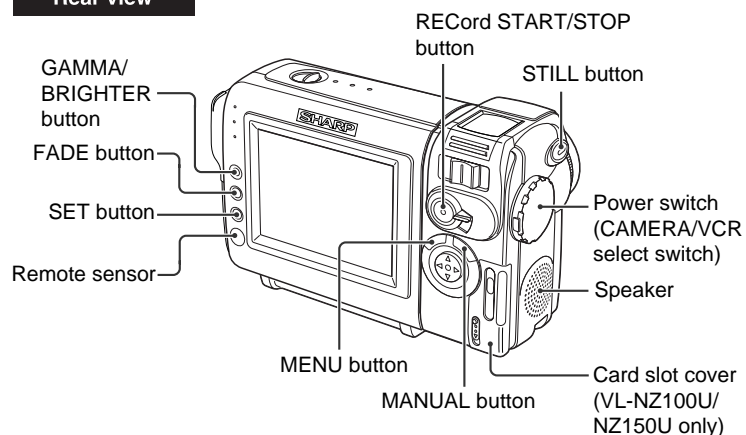
3. PART NAMES

For details on the use of each control.

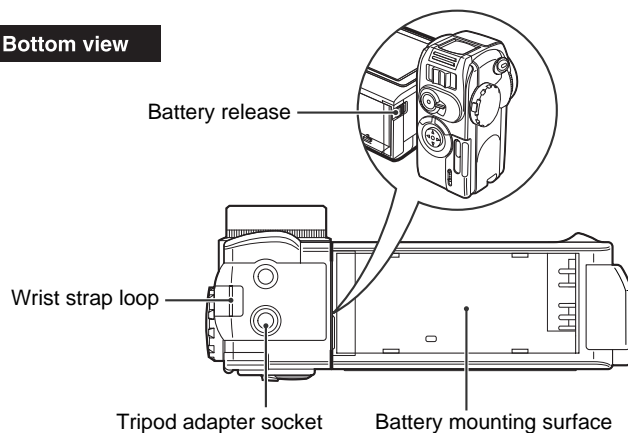
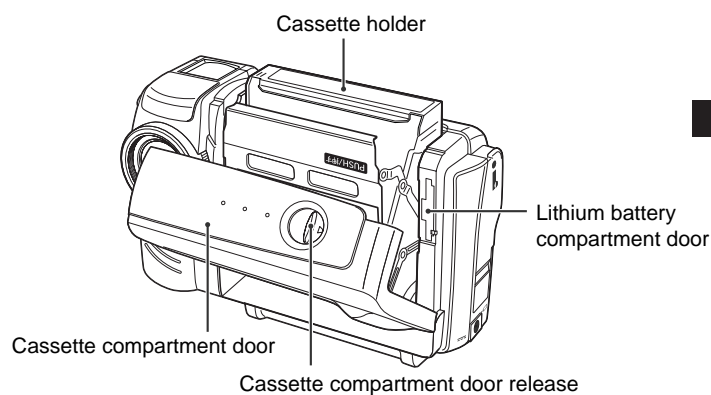
Front view



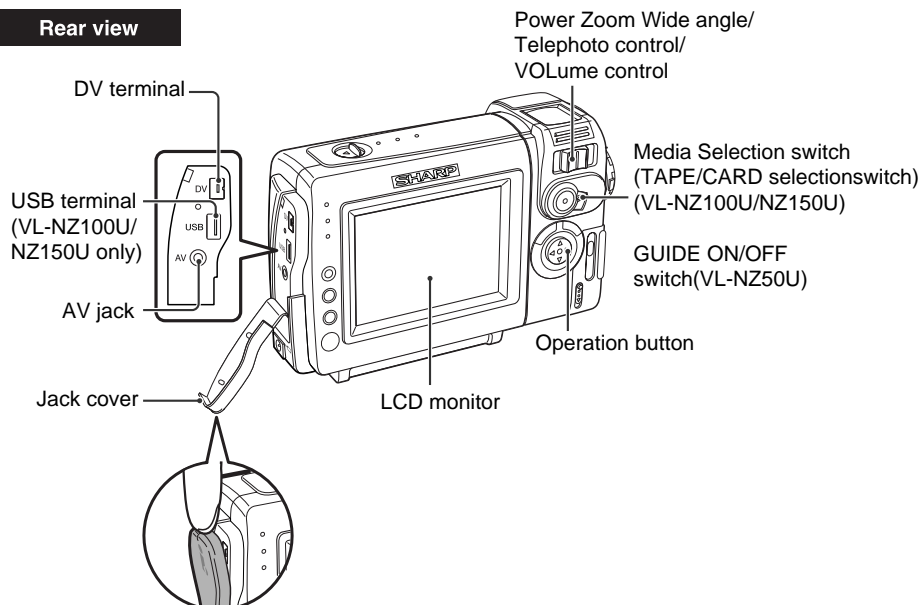
Rear view



Bottom view



Rear view

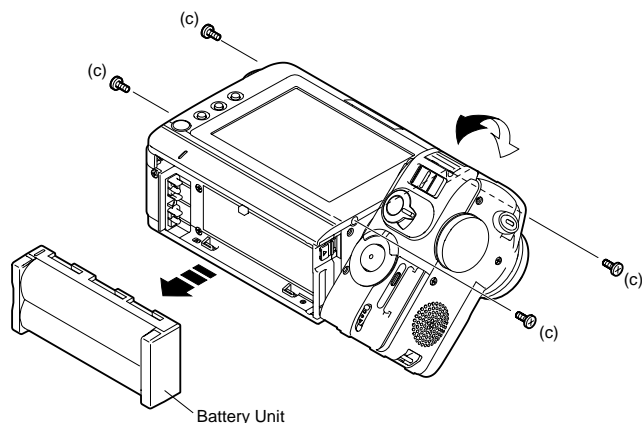


4. DISASSEMBLY OF THE SET

Note:

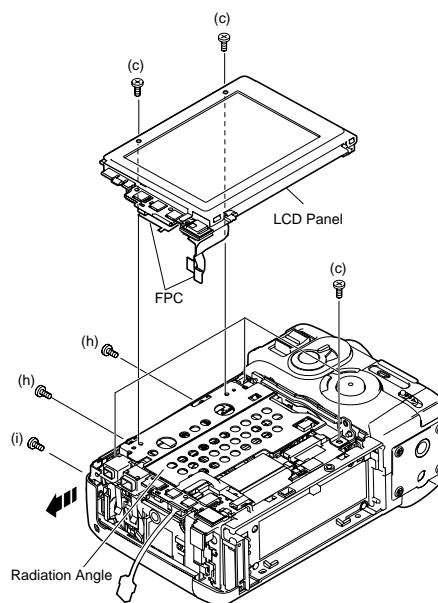
Before removing the cabinet, turn off the power supply, and ascertain that the battery have been removed.

1.



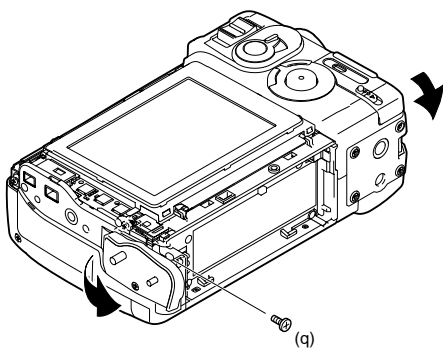
- 1) Remove the battery unit.
- 2) Remove the 4 screws ((c)XiPSN17P03000).

3.



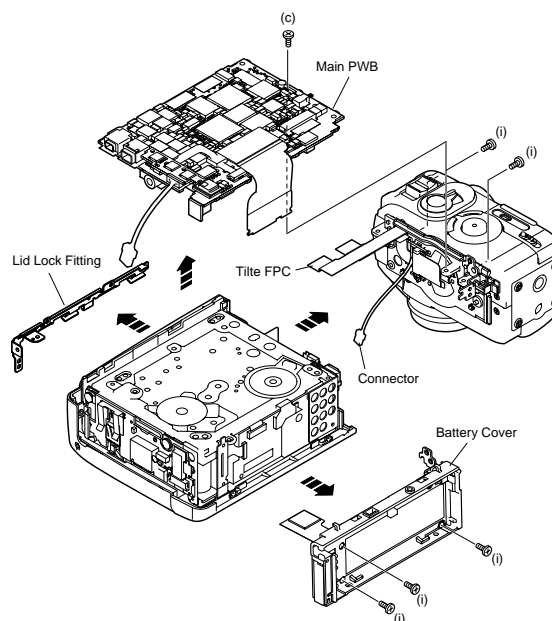
- 1) Remove the 1 screw ((i)XiPSF17P03000) and 2 screws ((h)XiPSF17P02000).
- 2) Remove the 2 screws ((c)XiPSN17P03000) to detach the VCR operation PWB. Then remove the FPC of the LCD panel and FPC of the reflector to detach the LCD panel.
- 3) Remove the 3 screws ((c)XiPSN17P03000) to detach the radiation angle.

2.



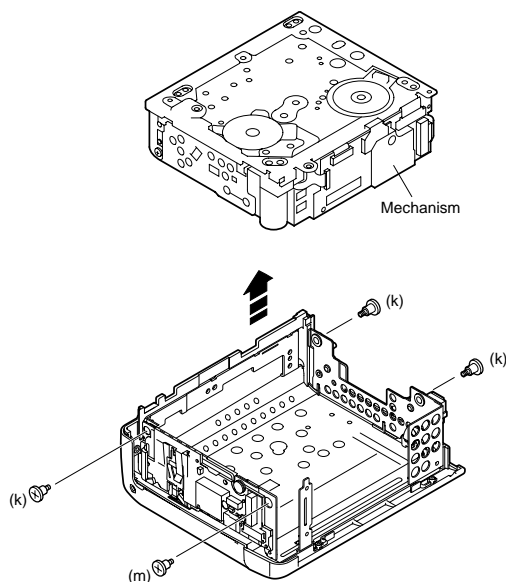
- 1) Remove the 1 screw ((q)LX-HZ0050TAFf) .

4.



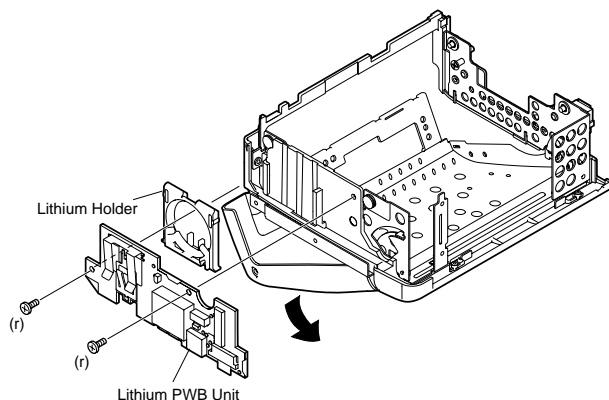
- 1) Remove the 1 screw ((c)XiPSN17P03000) and disconnect the tilt FPC to detach the main PWB.
- 2) Remove the lid lock fitting.
- 3) Remove the 4 screws ((i)XiPSF17P03000) to detach the battery cover.
- 4) Remove the 2 screws ((i)XiPSF17P03000) and disconnect the connector to detach the lens section.

5.



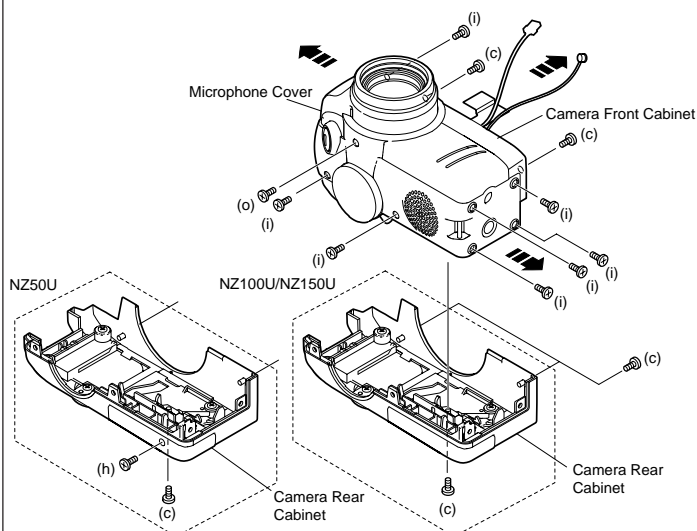
- 1) Take the mechanism out.
- 2) Remove the 3 floating screws A ((k)LX-BZ0251TAFD) and 1 floating screw B ((m)LX-BZ0253TAFN).

6.



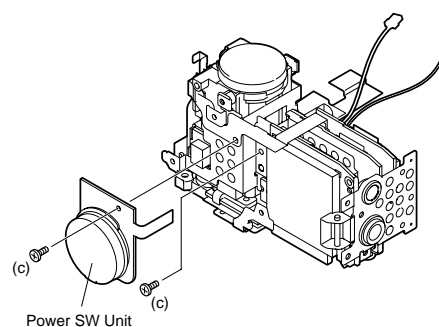
- 1) Remove the lithium holder and 2 screws ((r)XiPSN17P04000) to detach the lithium PWB unit.

7.



- 1) Remove the 3 screws ((c)XiPSN17P03000), 4 screws ((i)XiPSF17P03000) and 1 screw ((h)XiPSF17P02000) (NZ50U only) fixing the camera rear cabinet to detach it. (Note: When detaching the camera rear cabinet, pay attention to the FPC of the camera operation unit.)
- 2) Remove the 2 screws ((i)XiPSF17P03000) and detach the camera side cover in the direction of the arrow. (Note: When detaching the side cover, pay attention to the lead wire of the speaker.)
- 3) Remove the 1 screw ((i)XiPSF17P03000) and 1 screw ((o)XiPSN17P06000) and detach the microphone cover in the direction of the arrow. (Note: When detaching the microphone cover, pay attention to the lead wire of the microphone.)
- 4) Remove the 2 screws ((c)XiPSN17P03000) and camera front cabinet.

8.



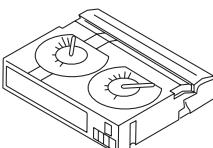
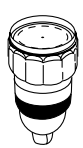
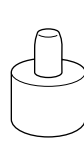
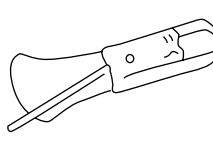
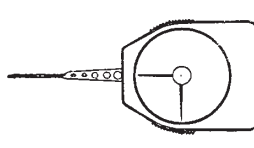
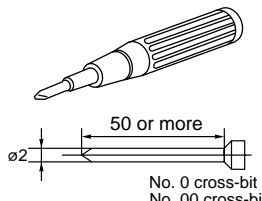
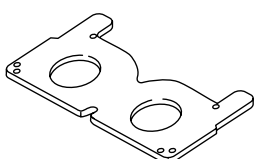
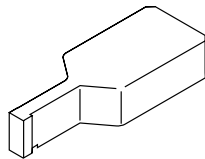
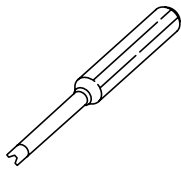
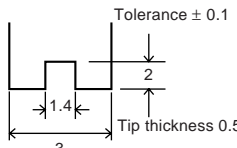
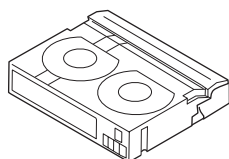
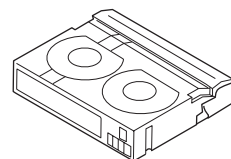
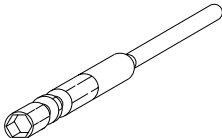
- 1) Remove the 1 screw ((c)XiPSN17P03000) to detach the power SW unit. (Note: When detaching the power SW unit, pay attention to the FPC.)
- 2) Remove the 1 screw ((c)XiPSN17P03000) to detach the lens unit.

5. MECHANISM ADJUSTMENT JIGS AND PARTS

5-1. Mechanism check adjustment jigs

<Note: The entries of list>

Configuration
1. Name
2. Part No.
3. Code
* Model, Uses Remarks

 <p>1. PB-use cassette Torque meter 2. 9DASD-1015 3. DB * 1mN·m/1.5mN·m</p>	 <p>1. Torque gauge 2. JiGTG0045 3. CN * For use in VS-REW winding torque measurement.</p>	 <p>1. Torque gauge head 2. 9EQTGH-DH5000 3. BW * For use with the torque gauge listed left.</p>	 <p>1. Tension gauge 4N 2. JiGSG0400 3. BK * For measurement of pinch roller pressure.</p>	 <p>1. Dial tension gauge 2. 9DAPTG-10-10W 3. CA * PTG-10</p>
 <p>1. Torque screwdriver 150mN·m 2. JiGTD1500RTDH 3. CB</p>	 <p>1. Master plane 2. 9EQMP-VLPD1 3. CL * For checking reel base height.</p>	 <p>1. Height adjustment jig 2. 9DAHG-PD1 3. BZ * For height adjusting.</p>	 <p>1. Height adjustment screwdriver 2. 9EQDRIVER-DH5 3. BC * For guide roller adjustment.</p>	<p>* For Tu guide adjustment. * For T roller adjustment. * Bit shape (see figure below).</p> 
 <p>1. Alignment tape - (I) 2. VR3-GAZXS 3. CF * For tape running adjustment.</p>	 <p>1. Alignment tape - (II) 2. VR3-GTZQS 3. CG * For SW point adjustment. * 90ADVC-TAPE can use, too.</p>	 <p>1. For hexagon nut opposite side 3mm bit. 2. 95CM22001 3. BL * For S guide hexagon nut installation.</p>	<p><Miscellaneous></p> <p>(1) Slide caliper (2) Precision screwdrivers (Phillips head and slotted) (3) Radio needle-nose pliers (4) Tweezers</p>	

Configuration
1. Name
2. Part No.
3. Code
* Model, Uses Remarks

5-2. Parts for regular periodic inspection and maintenance

<Note:

The entries of list>

* Model, Uses Remarks

<p>1. Oil Cosmo Hydro HV22 2. 9EQ-Oil-HV22 3. AE * Cosmo Petroleum K.K.</p>	<p>1. Cleaning paper 2. JiGDUSPER 3. AP * DUSPER Σ (SIGMA) (Ozu Co., LTD.)</p>	<p>1. Grease: Moly Coat YM-103 2. 99FGREASE-YM103 * Dow corning 1. Screw lock (1401B) * Three Bond</p>	<p>1. Cleaning liquid: Industrial-use ethyl alcohol * Commercially available item 1. Extremely thin cotton swab * Commercially available item</p>
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<How to make jigs for mechanism checking and adjustment>

(1) Reel hub for back tension measurement (Fig. 1)

- 1) Obtain a commercially available cassette tape reel hub. (Disassemble the cassette tape and remove the tape from the reel hub.)
- 2) Paste one end of a string (about 20cm long) to the reel hub with (for example) cellophane tape.
- 3) Paste the weight of about 0.21N on the upper side reel hub.

(2) String for use in pinch roller snap-fit force measurement (Fig. 2)

- 1) Obtain an approximately 20cm length of commercially available string.
- 2) Tie the 2 ends together to form a loop.

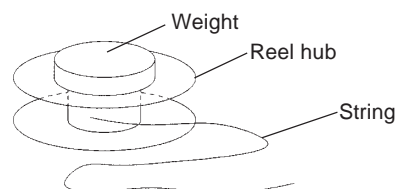


Fig. 1



Fig. 2

6. INSPECTION AND MAINTENANCE ITEMS AND INTERVALS

In order to keep the mechanical section always in good condition, perform the following inspection and maintenance at regular intervals. In addition, after repair, perform the following maintenance items regardless of how long the user has been using the unit.

6-1. List of inspection and maintenance items

○... Replace. □... Clean. △... Lubricate. ★... Check.

	Inspection and maintenance location	Time of use (h)					Symptoms that indicate need for maintenance	Remarks
		500	1,000	1,500	2,000	3,000		
Tape running system	Tape running section (see section 8-3)	□	□	□	□	□	<ul style="list-style-type: none"> Block-type noise Head hole clogging Tape damage 	Note: Replace the drum ass'y if the video head is cleaned but the envelope still does not appear. (When the envelope is normal, refer to "11. USEFUL TIPS".)
	Drum section, Video head (see section 8-3)	□	□	□	□	□		
		<Rollers> • Replace if there is anything abnormal in the rotation, or if there is run-out (that becomes large). <Other than the above> • Clean the section that contacts the tape (especially the lower drum helical section). Use the specified cleaning liquid.						
Drive system	Timing belt	—	★○	—	★○	★○	<ul style="list-style-type: none"> The tape fails to run. The tape becomes slack. Block-type noise Abnormal noise 	• Replace if there is anything abnormal.
	Pinch roller	□	□	□	□○	□		
	Capstan motor	—	○	—	○	○		
	Swing arm S reel base, Tu reel base	—	★○	—	★○	★○	• Abnormal noise	• Lubricate with oil. [Oil] Cosmo Hydro HV22 Note: Apply oil to the shaft, then wipe lightly with a cloth.
	Center pulley shaft Intermediate pulley shaft Swing arm boss Intermediate gear A shaft, Intermediate gear B shaft	—	△	—	△	△		
	Loading motor Mode switch	—	★○	—	★○	★○		
Performance checks	Abnormal noise	★	★	★	★	★	<ul style="list-style-type: none"> The tape fails to run. The tape becomes slack. Tape damage The play-back image is abnormal. 	• Replace any part that fails to perform within the standard.
	PB · VS/R winding torque	—	★	—	★	★		
	PB · VS/R · loading back tension	—	★	—	★	★		
	Tu reel base ratchet torque S reel base no-load torque	—	★	—	★	★		

[Oil] Cosmo Hydro HV22

[Grease] Moly Coat YM-103

[Screw lock] Three Bond 1401B

[Cleaning liquid] Industrial-use ethyl alcohol

6-2. Precautions

- When replacing any part, always replace the cut washer that was removed with a new one.
- This mechanism does not have control adjustment. If the control cannot be set as required, clean and or replace parts.
- On the oil
 - Always use the specified oil. (Using another kind of oil can cause various kinds of trouble.)
 - Always use clean oil, without any mixed-in dirt, to lubricate bearings. (Using oil with dirt mixed in can cause the bearings to wear or to stick.)
 - One drop of oil is the amount shown in the Fig. 1, on the point of a pin.
- Perform circuit repair, tape running adjustment, etc. with the cassette controller assembly attached to the mechanism.
- When operating the mechanism separately, apply voltage to the loading motor. However, the terminal voltage must be DC3V~4V. (When the mechanism is connected to the main PWB, do not apply external voltage to the loading motor. It may cause a trouble.) (Forcing the gears to turn by hand entails danger of breakage.) If the mechanism is separated from the unit, the capstan motor may rub and be damaged if spacing under the mechanism is inadequate.
- To install the cassette controller, push section A in the Fig. 2. Do not push anything else.
- Do not deform any of the mechanical parts.

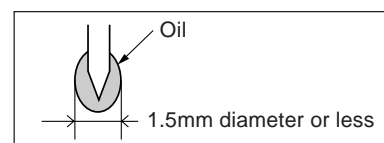


Fig. 1

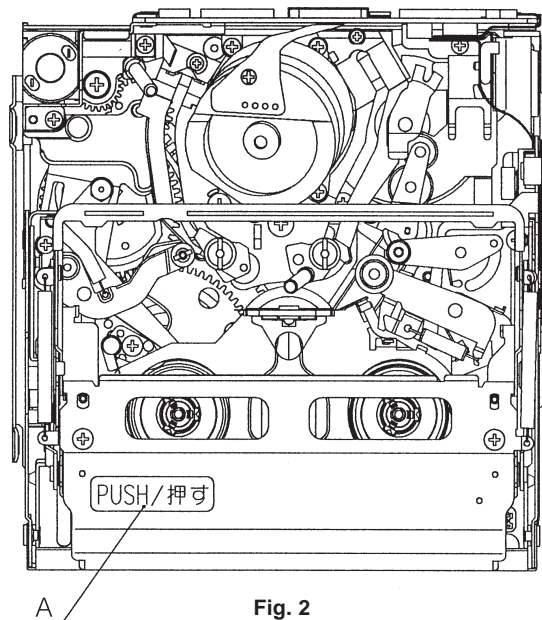


Fig. 2

7. MECHANICAL ADJUSTMENTS AND CHECKS

The items discussed here relate to general on-site servicing (field servicing). Adjustments and replacements that require sophisticated facilities, jigs and technology are omitted.

In addition, in order to maintain the characteristics that the unit has when it is new, not only are inspection and maintenance necessary, but it is absolutely necessary that, for example, the tape not be damaged, and always use jigs for adjustments that require them.

<Precautions>

(1) Always set the power supply and state of the unit as follows Notes for mechanism adjustments and checks.

AC adapter used, with cassette controller assembly

AC adapter used, without cassette controller assembly (Independent Mechanism)

DC3V, without cassette controller assembly (Independent Mechanism)

- (2) When the mechanism is connected to the main PWB, do not apply external voltage to the loading motor. It may cause a trouble.
(3) Always run the tape with the cassette controller assembly attached.

7-1. Checking the playback (recording) winding torque AC adapter used, with cassette controller assembly

- (1) Set the torque cassette with the cassette controller assembly attached, then, in SP recording mode (playback mode if a signal has already been recorded in SP mode on the tape), confirm that the torque on the winding side is within the standard.

<Winding torque standard in record (playback) mode>

(If there is torque ripple, read the center value.)

0.70 +0.4/-0.3mN·m, ripple 0.4mN·m or less

7-2. Checking the rewinding playback (VS-REW) winding torque

AC adapter used, without cassette controller assembly (Independent Mechanism)

- (1) Remove the cassette controller assembly, press the DOWN switch, using the adhesive tape and referring to 9-3, operate in the TEST mode (T01) to rewind, and set the rewinding playback (VS-REW) mode.
(2) Set the torque gauge on the S reel base, press the front end of tension post with your finger in the arrow A direction so as to ascertain that the winding torque is as specified. (Check without rotating the torque gauge.)

<Rewinding playback (VS-REW) winding torque standard>

(If torque ripple exists, read its center value.)

1.6 ± 0.6mN·m, ripple 0.5mN·m or less

- (3) After checking the winding torque remove the torque gauge, and remove the adhesive tape used in item (1) above (refer to 9-3). The STANDBY mode is set automatically.

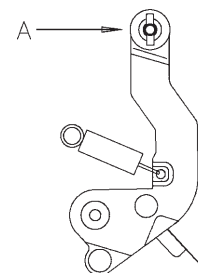


Fig. 1. Removal of tension band when measuring the rewinding playback (VS-REW) winding torque

7-3. Checking of reel base height DC3V, without cassette controller assembly (Independent Mechanism)

- (1) Remove the cassette controller assembly (refer to 9-2).
(2) Referring to 9-1, apply DC3V to the loading motor and put the system into playback mode.
(3) Taking adequate care so that the master plane does not contact drum, running parts (guide roller, etc.), or the MIC contacts. Fit the master plane holes to the 2 guides (A and B) in Fig. 2.
(4) Confirm that the heights of the S reel base reel receiving surface and the Tu reel base reel receiving surface below the master plane top surface are within the set values, using, for example, a slide calliper (Fig. 3).
When checking the S reel base height, press the front end of tension post in the arrow A direction with your finger to release the tension band, and then check the height in this state (Fig. 1).

- (5) If the height is not within set values, replace the washer under the reel base, and adjust as specified.

Note: After the adjustment, make sure that the reel bases rotate smoothly.

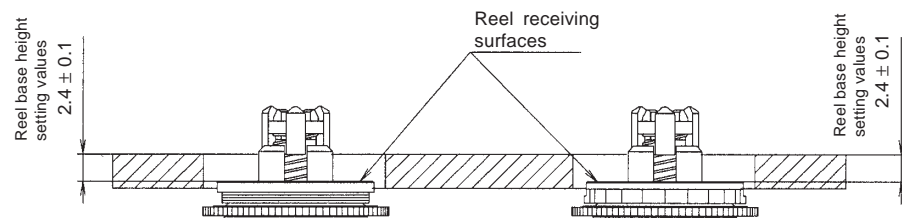


Fig. 3

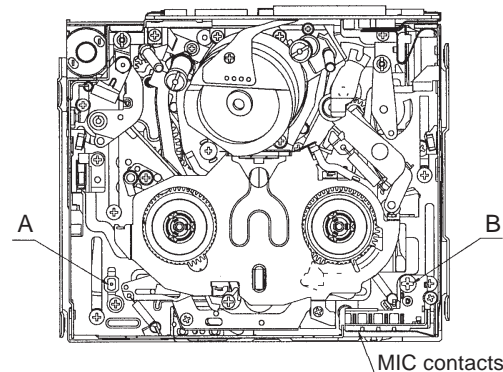


Fig. 2

7-4. Back tension torque check and adjustment in record (playback) mode

AC adapter used, with cassette controller assembly

(1) Checking

Set the torque cassette (SD-1015), and make sure in the SP record mode that the supply side torque is within the standard shown below (or in the playback mode for the tape on which the signal has been SP-recorded).

<Standard>

(If torque ripple exists, read its center value.)

$0.7 \pm 0.1 \text{ mN}\cdot\text{m}$

(2) Adjustment (Fig. 4)

If the value is out of standard range, adjust, using the screw 1 shown in Fig. 4.

1. Loosen the screw 2 slightly.

2. Adjust to turning the screw 1. When back tension is too high, turn the screw 1 counterclockwise (CCW).

When back tension is too low, turn the screw 1 clockwise (CW).

3. After adjustment fix the angle with the screw 2. (At this time take care so as to prevent excessive tightening.) Apply Screw Lock to the screw 1.

<Caution>

Screw tightening torque: $0.04 \text{ N}\cdot\text{m}$

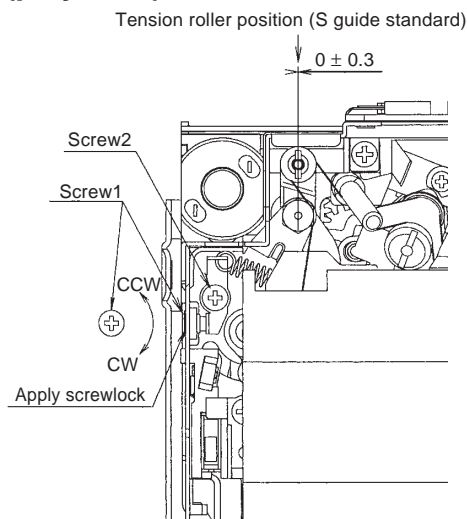


Fig. 4. Check (tape exists)

7-5. Checking and adjustment of tension roller position in record (playback) mode

DC3V, without cassette controller assembly (Independent Mechanism)

(1) Checking

Before winding the 60-min tape make sure that the tension roller is in the same position as S guide as shown in Fig. 4.

If not, take out the tape and adjust in the following procedure.

(2) Adjustment (Fig. 5)

1. Set the playback mode without loading the tape.

2. Loosen the screw 3 slightly (to such an extent that the tension band holder 4 can be moved).

3. If the tension roller is inside from the specified position, shift the tension band holder 4 in the arrow (A) direction. If the tension roller is outside, shift the tension band holder in the arrow (B) direction, and fix with the screw 3. (Proper shift must be 0.2 to 0.6mm outside from the specified position.)

4. Check the position by the procedure described in item (1) Checking above.

5. If the position is not specified position, adjust again.

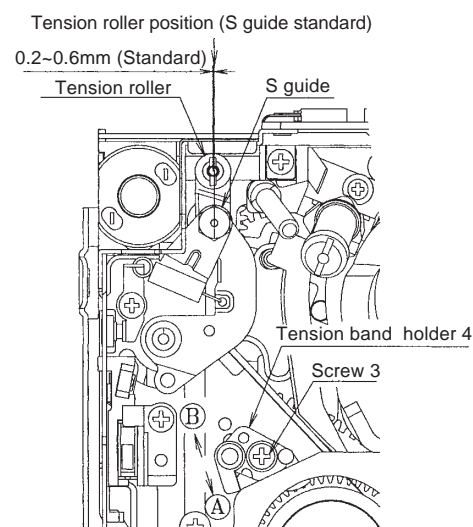


Fig. 5. Position adjustment (tape does not exist)

7-6. Checking of supply S reel base no-load torque

DC3V, without cassette controller assembly (Independent Mechanism)

(1) Remove the cassette controller assembly, then apply DC3V to the loading motor and put the system into L. start mode (refer to 9-1).

(2) Move the swing arm toward the Tu reel base side.

Be careful not to cause damage to the gears and other parts in the process. (Fig. 6)

(3) Set a back tension measurement reel hub on the S reel base.

(4) Using a dial tension gauge, pull the string in the A direction, then confirm that the tension is within the standard.

<FF back tension standard>

(If the tension fluctuates, read its center value.)

30mN or less

7-7. Checking of loading back tension

DC3V, without cassette controller assembly (Independent Mechanism)

(1) Remove the cassette controller assembly, then apply DC3V to the loading motor and put the system into L. start mode. (refer to 9-1)

(2) Move the swing arm toward the S reel base side. Be careful not to cause damage to the gears and other parts in the process. (Fig. 7)

(3) Set a back tension measurement reel hub on the Tu reel base.

(4) Using a dial tension gauge, pull the string in the A direction, then confirm that the tension is within the standard.

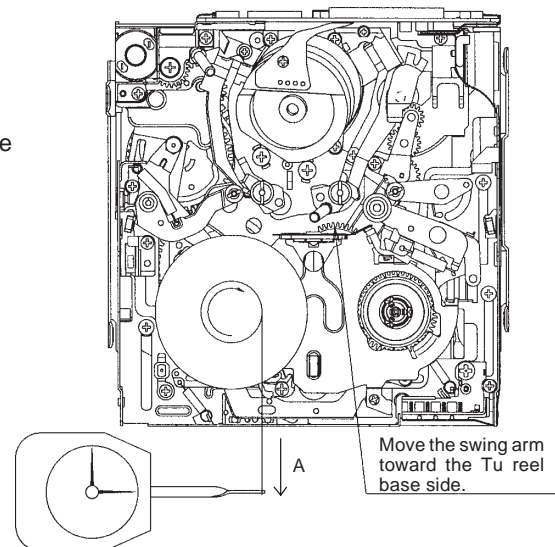


Fig. 6. S reel base no-load torque measurement method

<REW back tension standard>

(If the tension fluctuates, read its center value.)

15 ± 12mN

7-8. Checking of winding Tu reel base ratchet torque

DC3V, without cassette controller assembly (Independent Mechanism)

- (1) Remove the cassette controller assembly, then apply DC3V to the loading motor and put the system into standby mode. (refer to 9-1)
- (2) Move the swing arm toward the S reel base side.
Be careful not to cause damage to the gears and other parts in the process. (Fig. 8)
- (3) Set a back tension measurement reel hub on the Tu reel base.
- (4) Using a dial tension gauge, pull the string in the A direction, then confirm that the tension is within the standard.

<Winding Tu reel base ratchet torque standard >

(If the tension fluctuates, read its center value.)

100mN or less

7-9. Checking of rewinding playback (VS-REW) back tension

DC3V, without cassette controller assembly (Independent Mechanism)

- (1) Remove the cassette controller assembly, then apply DC3V to the loading motor and put the system into rewinding playback (VS-REW) mode. (refer to 9-1)
- (2) Move the swing arm toward the S reel base side.
Be careful not to cause damage to the gears and other parts in the process.
- (3) Set a torque gauge on the Tu reel base.
- (4) Turning the torque gauge to counterclockwise (1 turn for 3 seconds), then confirm that the torque is within the standard.

<Rewinding playback (VS-REW) back tension standard value>

(If the tension fluctuates, read its center value.)

0.70 +0.6/-0.3mN·m

7-10. Checking of pinch pressing force

DC3V, without cassette controller assembly (Independent Mechanism)

- (1) Set the pinch roller pressing force measuring thread on the pinch lever (position A, Fig. 9).
- (2) Set the mechanism to the playback mode, press the pinch roller against the capstan shaft.
- (3) Fit the tension gauge to the pinch roller pressing force measuring thread, pull in the arrow B direction shown in Fig. 11 to separate a little the pinch roller from the capstan shaft.
- (4) Gradually return the pinch roller, and when the pinch roller contacts parallel the capstan shaft, read the value (see Fig. 10) to make sure that the value conforms to the standard shown below.

<Standard>

1.8 +0.3/-0.5N

<Caution>

After making this measurement, quickly release the system from playback mode and remove the pinch roller from the capstan shaft. (If the pinch roller is left fitted onto the capstan shaft for a long time, the pinch roller will be deformed.)

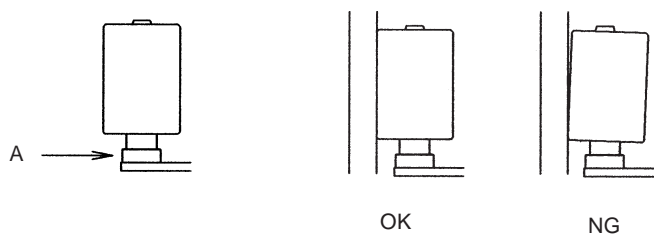


Fig. 9

Fig. 10

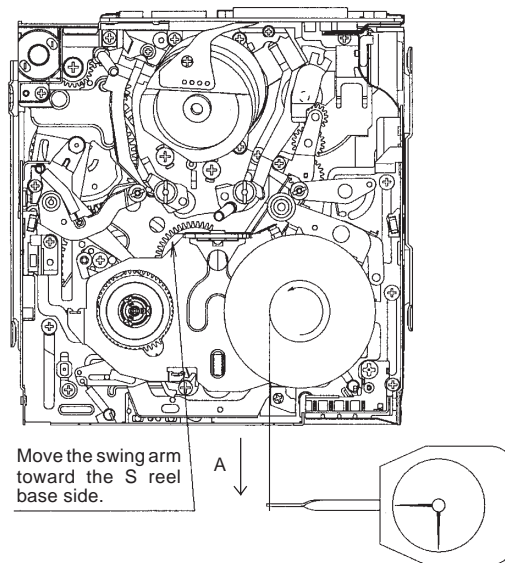


Fig. 7. Loading back tension measurement method

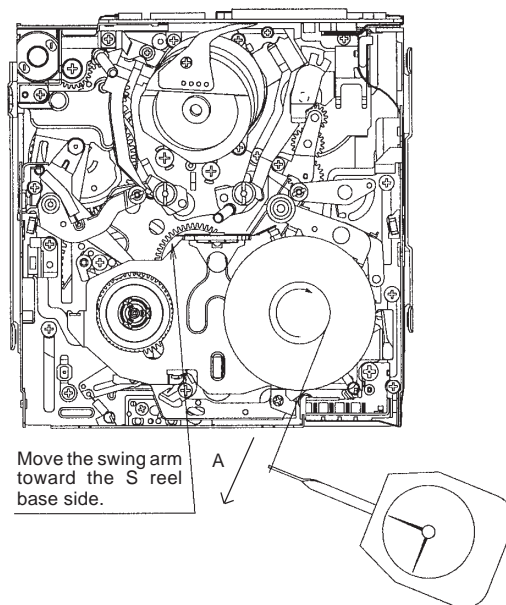


Fig. 8. Winding Tu reel base ratchet torque measurement method

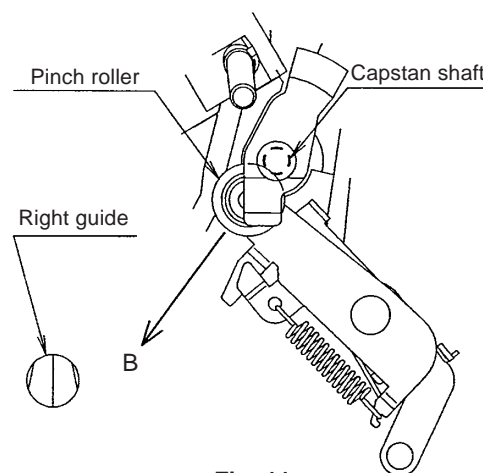
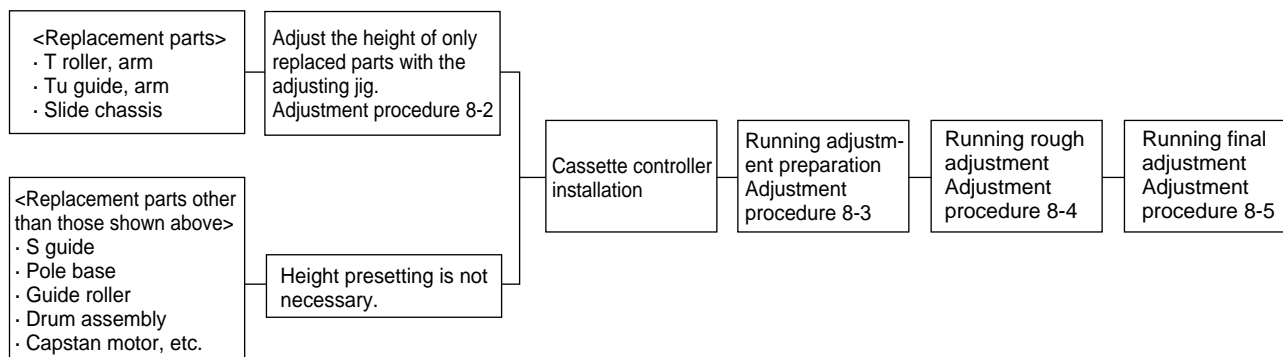


Fig. 11

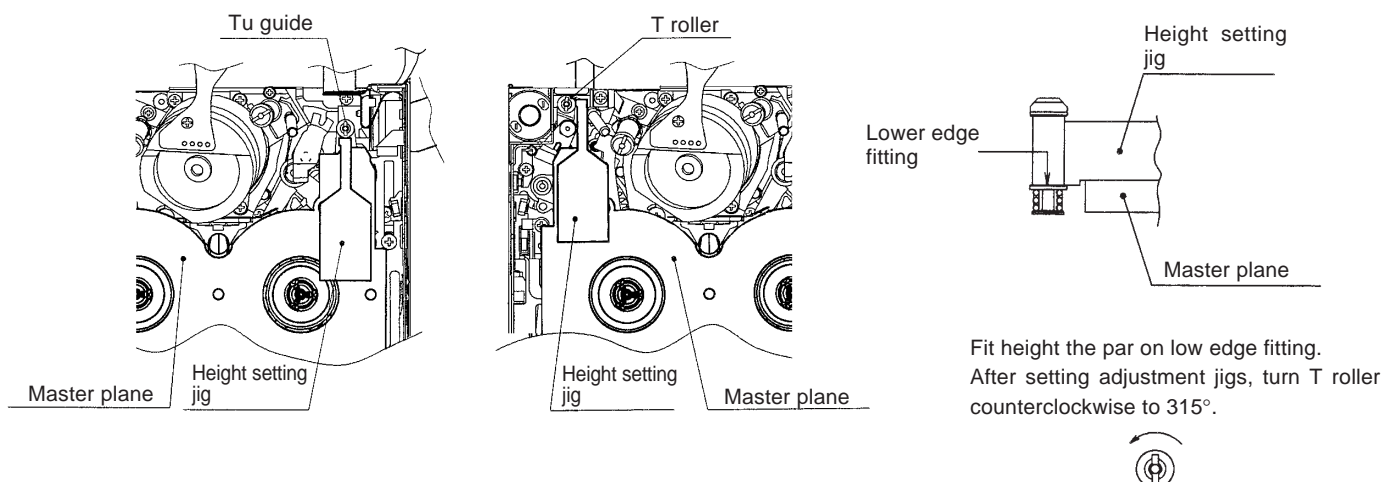
8. TAPE RUNNING ADJUSTMENT

8-1. Adjustment locations



8-2. Running height adjustment

- After replacement of T roller or Tu guide adjust the height . (Adjust only the replaced parts.)
- After height adjustment do not turn the T roller. If crease is found on the tape of Tu guide, remove the crease by rotating. (As for details refer to the “Running rough adjustment”.)
- After height adjustment of T roller or Tu guide, apply Screw lock to an end of shaft. (After replacement of S guide apply Screw lock to same point, too.)

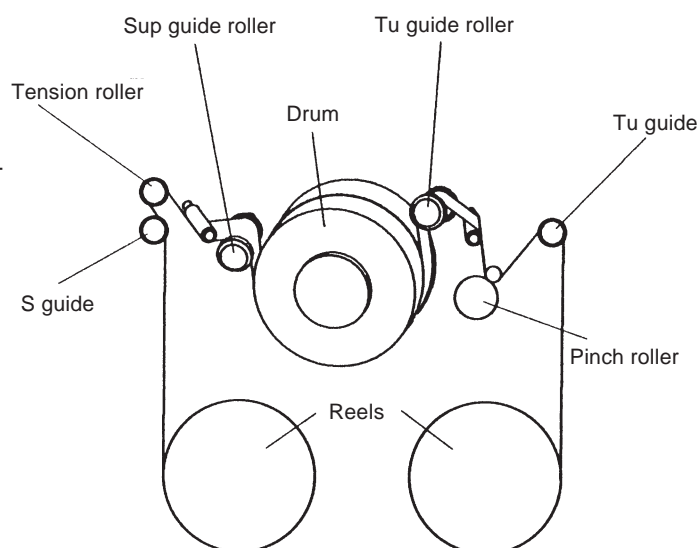


8-3. Preparation for tape running adjustment

Meters, jig... Oscilloscope, Adjustment remote control, Height adjustment screw driver, Alignment tape (for tape running adjustment, for switch point adjustment), Master plane, Height adjustment jig.

<Method and description>

- (1) Clean the tape running surface (especially, adequately clean the drum surface and the lower drum helicam surface).
- (2) Attach the cassette controller.
- (3) Connect an oscilloscope to each TP on the relay circuit board.
- (4) Turn the AC adapter power ON.
- (5) Using the adjustment remote control unit, put the system TEST mode T-05.
- (6) Replay the alignment tape for running adjustment, and make sure that the tape is running in the SP mode.
- (7) Check the oscilloscope playback envelope, then, at +1/4 shift and -1/4 shift, check whether all of it is flat. If it is not, perform the following adjustment so that it becomes flat. (Each time you push the PLAY key, the shift will change; +1/4 shift → Normal → -1/4 shift → Normal, in order.)



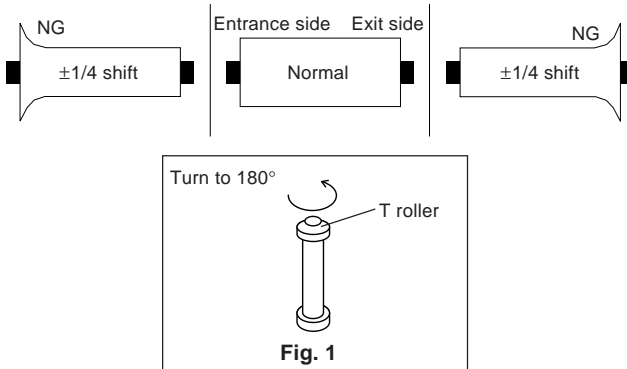
8-4. Running rough adjustment

(With cassette controller)

1) Su, Tu guide roller height adjustment

<Method and description>

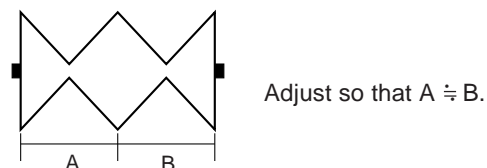
- (1) Loosen the guide roller lock screw, then tighten loosely so that the roller turns easily.
 - (2) Replay an alignment tape, and adjust the Sup, Tu guide roller so that the envelope sides of entrance and exit are flat.
 - (3) Perform $\pm 1/4$ shift, then, as in the above case, adjust until the envelope becomes flat.
- * If running is difficult for the entrance changed, turn the T roller to counterclockwise 180°. (refer to Fig. 1)



2) Check of V/SR envelope wave form

<Method and description>

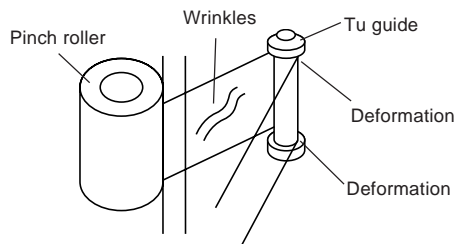
- (1) Confirm that the envelope waveform peaks in V/SR mode are uniform.
- (2) If they are not uniform, fine-adjust the guide roller and the Tu guide.



3) Check of tape wrinkles

<Method and description>

- (1) Check that the tape is not distorted between the Tu guide and pinch in the PB mode and the V/SR mode.
- ⇒ If crease is found, make an adjustment in the range of $\pm 180^\circ$.
- ⇒ After adjustment apply Screw Lock.



4) Check the rising time of the envelope wave form

<Method and description>

- (1) Check the rising time of the envelope when switching from V/SR mode to PB mode. (Within 5 sec)
- (2) Check the rising time of the envelope when switching from STOP mode to PB mode. (Within 5 sec)

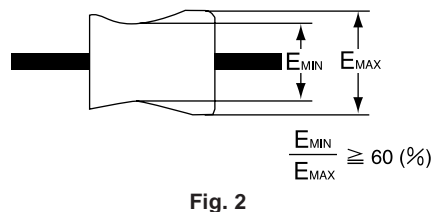
8-5. Final running adjustment

(With cassette controller)

1) Adjustment of Sup and Tu guide roller height

<Method and description>

- (1) Perform $\pm 1/4$ shift, then if the envelope wave's ratio of MAX. to MIN. are 60% or less, adjust again the height of guide roller. (Refer to Fig. 2)
- (2) Finally adjust the lock screw of Sup and Tu guide roller.
- (3) Once perform unloading and then loading to set the PB mode, and make sure that the envelope waveform does not change.



2) Adjustment of playback SWP

<Method and description>

- (1) Playback the alignment tape for switch point adjustment.
- (2) Perform SWP automatic adjustment with adjustment remote control.

* When replacing the mechanism and drum, adjust the phase and equalizer using the adjustment remote control. (Refer to "10. ADJUSTING THE ELECTRICAL CIRCUITS".)

9. MECHANICAL SECTION ASSEMBLY AND PARTS REPLACEMENT (DISASSEMBLY AND REASSEMBLY)

Mechanical section disassembly and reassembly are explained in this section.
For removal of the cabinet, etc., refer to **4. DISASSEMBLY OF THE SET**.

<Precautions>

1. Always replace cut washers that have been removed, for example in parts replacement, with new ones.
2. When reassembling, be careful not to allow screws, washers or foreign matter to enter. They can cause mechanical misoperation.
3. Use the cleaning liquid, oil, grease and screw lock that are specified below. Use of any other kind can cause mechanical misoperation.

Oil: Cosmo Petroleum : Cosmo Hydro HV22

Screw lock: Three Bond :1401B

Grease: Dow Corning : Moly Coat YM-103

Cleaning liquid: Industrial-use ethyl alcohol

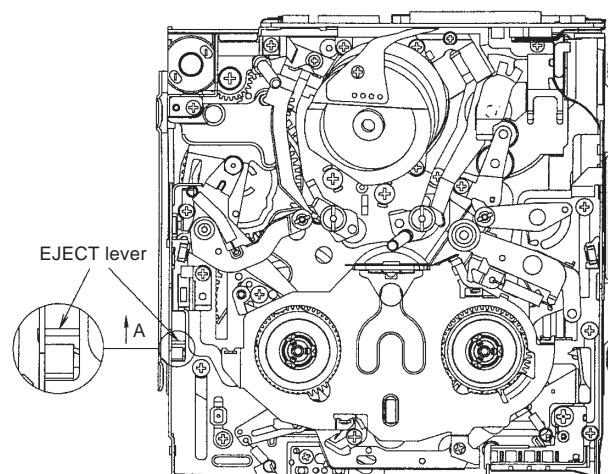
9-1. On the mechanical modes

When operating the mechanism separately, apply DC3~4V to the loading motor.

(When the mechanism is connected to the main PWB, do not apply external voltage to the loading motor. It may cause operational problems.)

(1) EJECT mode

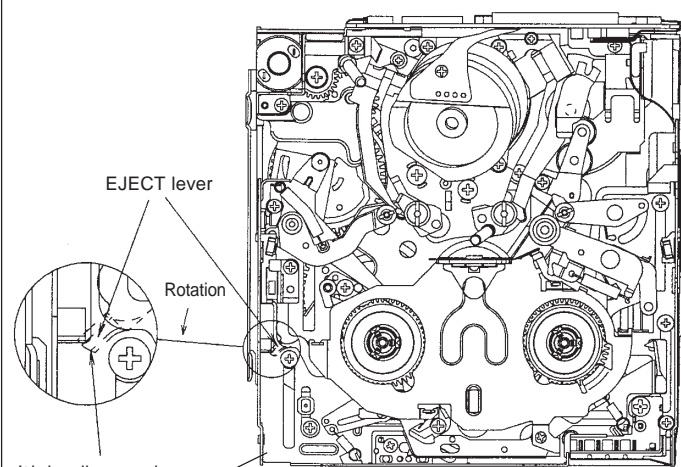
The mechanism position to take out the cassette where the EJECT lever is extremely shifted in the A direction. (It is impossible to lock the cassette controller assembly in this mode.)



EJECT mode diagram

(2) STANDBY mode

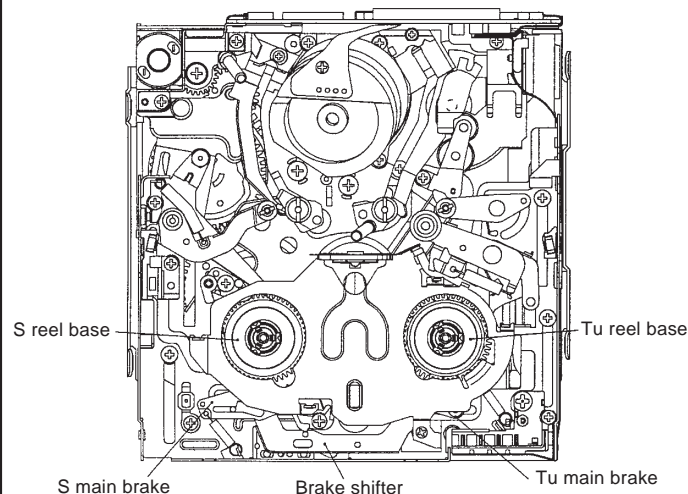
The mechanism position to set the cassette where the slide chassis is at the farthest position from the drum and the EJECT lever is in counterclockwise rotated position (position where the cassette controller assembly can be locked).



STANDBY mode diagram

(3) LOADING START mode

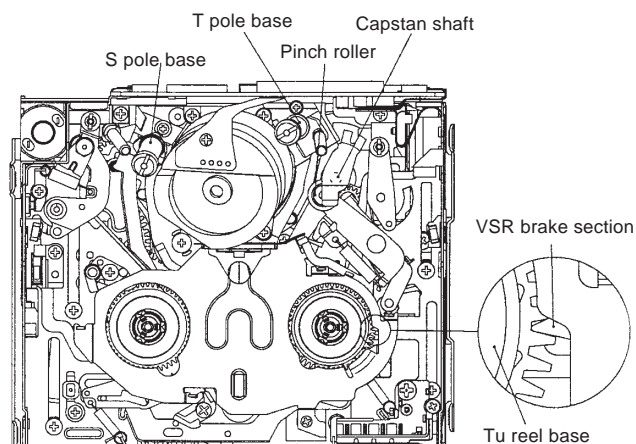
This is the mode where the tape is wound around the winding reel when a cassette with visible wind start leader tape is loaded. (The brake shifter moves to the left, the S main brake is separated from the S reel base and the Tu main brake is separated from the Tu reel base.)



LOADING START mode diagram

(4) REWINDING (VSR) mode

The mechanism position to rewind the tape (fast rewinding playback). The S and T pole base is pressed, the pinch roller is pressed to the capstan shaft, the brake shifter VSR brake section engages with the Tu reel base gear.

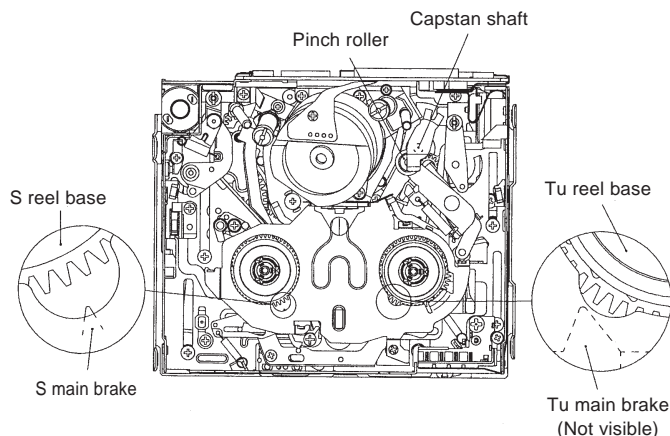


REWINDING (VSR) mode diagram

(5) **PLAYBACK (RECORD, FF, VSF) mode**

The mechanism position for playback, record, FF and fast feed playback.

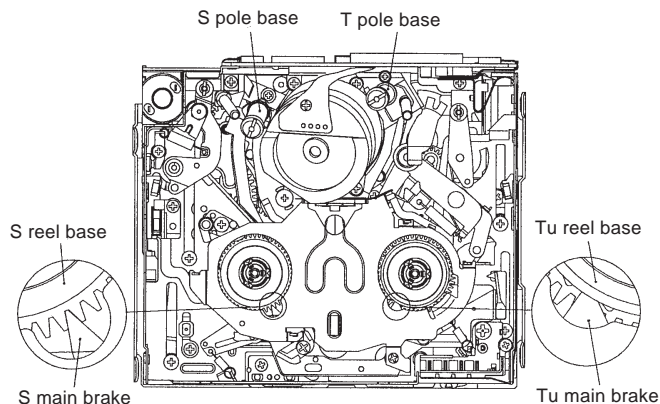
The pinch roller is pressed to the capstan shaft, and the S/Tu main brake is separated from the S/Tu reel base.



**PLAYBACK mode diagram
(RECORD, FF, VSF)**

(6) **STOP mode**

The system is in the STOP (Rec Lock in CAMERA mode) position; the S and the T pole bases are snap-fitted to the drum base, the S brake is in contact with the S reel base, and the Tu brake is in contact with the Tu reel base.



STOP mode diagram

9-2. Cassette controller assembly

<Removing>

(1) Apply DC3V to the loading motor to enter the standby mode.

Press the lock lever in the arrow direction to raise the cassette controller. (See Fig. 1; **A** or **B** direction.)

(2) Turn the damper lever in the arrow **C** direction to release the engagement of the damper bar. (See Fig. 2.)

(3) Remove two screws **E**, and remove the down guide **D** in the arrow **F** direction. (See Figs. 3 and 4.)

Take care that the slide chassis is provided with the down guide positioning **G** or **H**.

(4) Slide the cassette controller in the arrow **I** direction, remove the outer link shaft (both sides) toward the inside of the mechanism, and turn the cassette controller in the arrow **J** direction. (See Fig. 5.)

(5) Slide the cassette controller in the arrow **K** direction. (See Fig. 6.)

<Installing>

(1) Apply DC3V to the loading motor to enter the standby mode.

(2) For assembly, reverse the removing procedure (5) thru (2).

Tightening torque of two screws **E**: 40±4mN.m

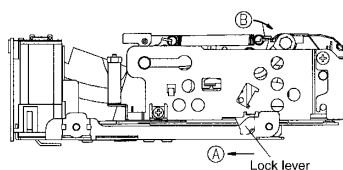


Fig. 1.

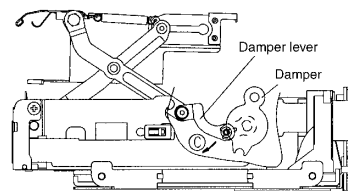


Fig. 2.

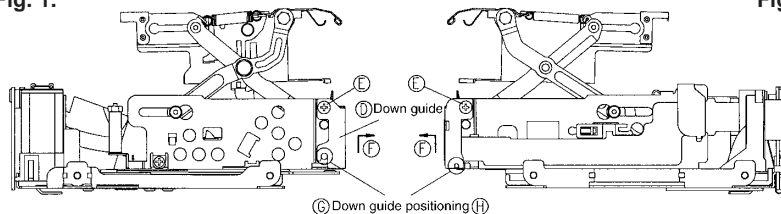


Fig. 3.

Fig. 4.

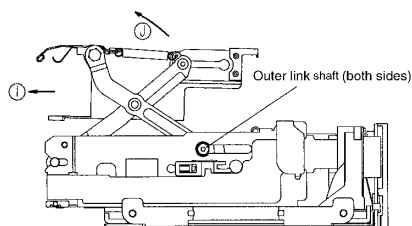


Fig. 5.

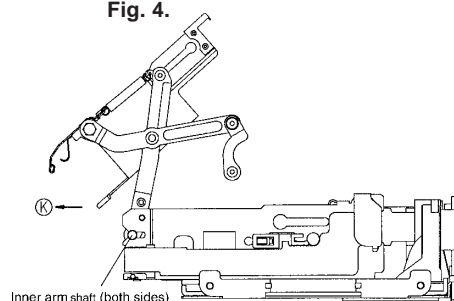


Fig. 6.

9-3. How to operate with the circuit board without the cassette controller assembly.

In this method, if the procedure is followed incorrectly there is danger of damaging the mechanism and the tape, so except in special cases, such as when measuring the VSR torque, do not perform this procedure. Normally operate this unit with the cassette controller assembly attached.

Be sure to follow each caution mentioned.

- (1) Apply DC3 ~ 4V to the loading motor to enter the standby mode.
- (2) Securely press the movable piece \textcircled{L} of the down SW with cellophane tape or similar to turn on SW. (Take care that the movable piece turns only in the shown arrow direction.)

Note: To enter REC mode, press the pin of the recognition switch \textcircled{M} .
(Unnecessary in other modes.)

- (3) Set the test mode (T-01) with the adjustment remote controller without putting the tape, and the mechanical operation will become possible with the mode key.
- (4) For ejection, remove the tape of (2).

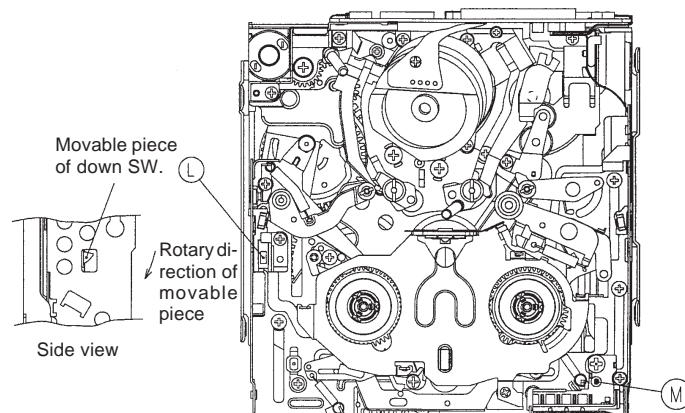


Fig. 7. LOADING START mode

9-4. Phase matching

Referring to Figs. 8 and 9, align the phase for the following parts.

- (1) Eject lever (2) Eject control lever (3) Mode SW (4) Main cam (5) Sub cam

Note: Before disassembly, sufficiently check the marker position.

Note: When installing the joining gears, verify that the phase matching holes of the main cam and subcam are aligned to the hole of the chassis.

Note: After the phase is aligned, turn the mode SW with hand, and verify that it turns nearly one turn.
(After verification, return it to the original position.)

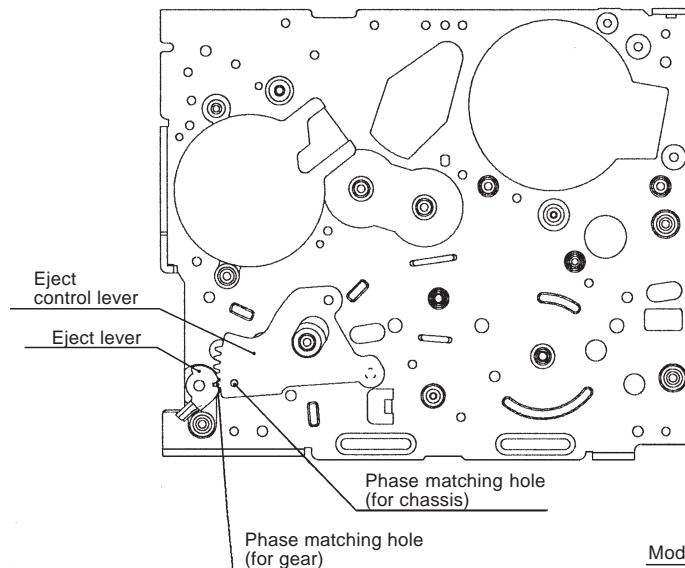


Fig. 8

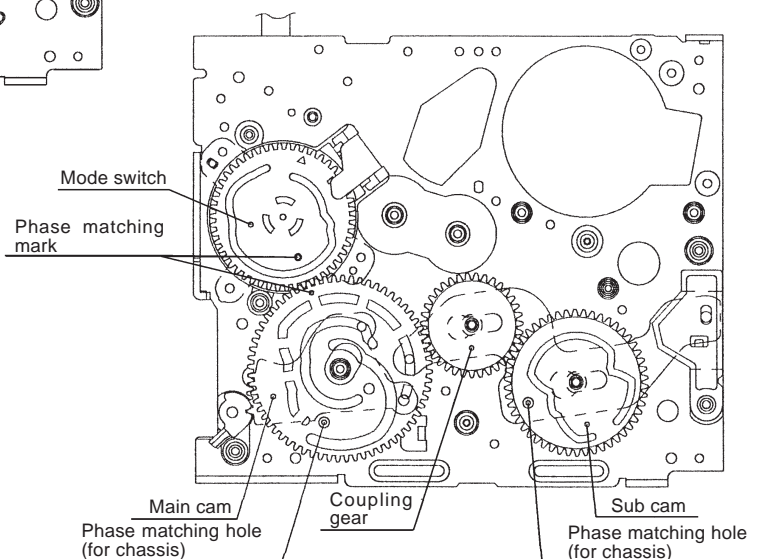


Fig. 9

9-5. Reassembly

9-5-1. Reassembly in side of the main chassis.

Note) Numbers before part names are given as a guide to the order of assembly.

As for greasing/oiling/cleaning places refer to the attached drawings (Grease/Oil application side of the main chassis).

1.

Item	Tightening torque	Quantity
A S Tight · M1.4 x L3	70mN·m	3

2.

Item	Tightening torque	Quantity
B CWØ1.2-Ø3.0-10.25		1

3.

Item	Tightening torque	Quantity
C Special screw · M1.4 x L1.6	40mN·m	2
D Special screw with step · M1.4 x L6.25	70mN·m	1

4.

Item	Tightening torque	Quantity
C Special screw · M1.4 x L1.6	40mN·m	1
E S Tight · M1.4 x L4	70mN·m	2
F S Tight · M1.4 x L2	70mN·m	1

5.

Item	Tightening torque	Quantity
G Special head screw · M1.4 x L1.5	40mN·m	2

6.

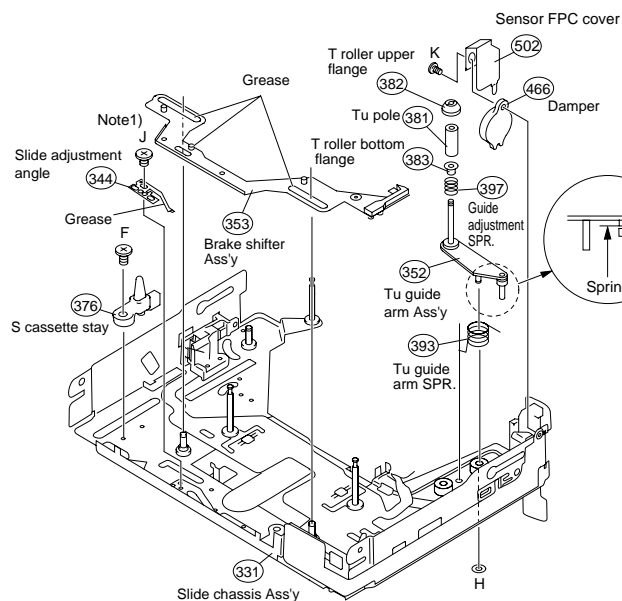
Item	Tightening torque	Quantity
H CWØ0.7-Ø2.2-10.25		2
I Special screw · M1.2 x L1.8	5mN·m (Tentative tightening)	2

9-5-2. Reassembly in side of the Slide chassis.

Note) Numbers before part names are given as a guide to the order of assembly.

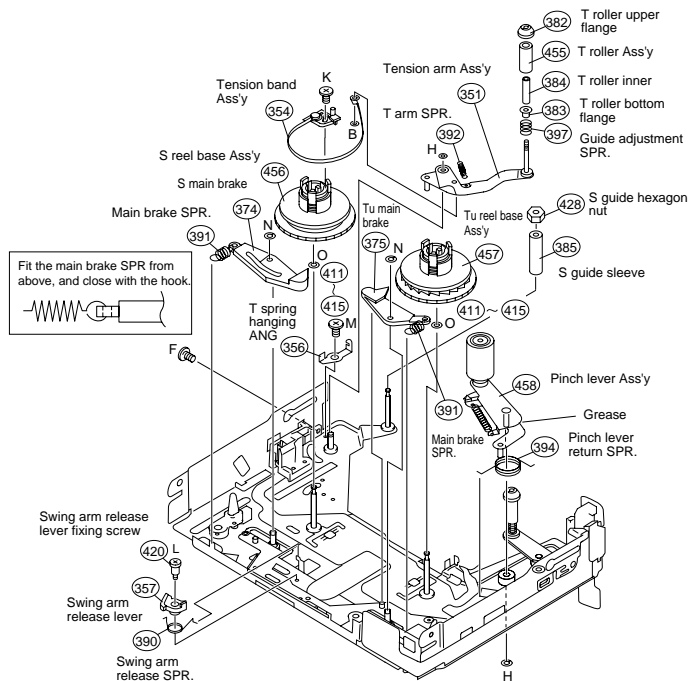
As for greasing/oiling/cleaning places refer to the attached drawings (Grease/Oil application side of the slide chassis)

1.



	Item	Tightening torque	Quantity
F	S Tight · M1.4 x L2	40mN·m	1
H	CWø0.7-ø2.2-t0.25		1
J	Special screw · M1.2 x L1 Note 1: Use the No. 00 bit.	40mN·m	1
K	Special head screw · M1.4 x L2	40mN·m	1

2.



Note 1: Take care for scratch and hit mark on (381), (382), (383), (384) and (455). Handle the tension band with care against deformation.

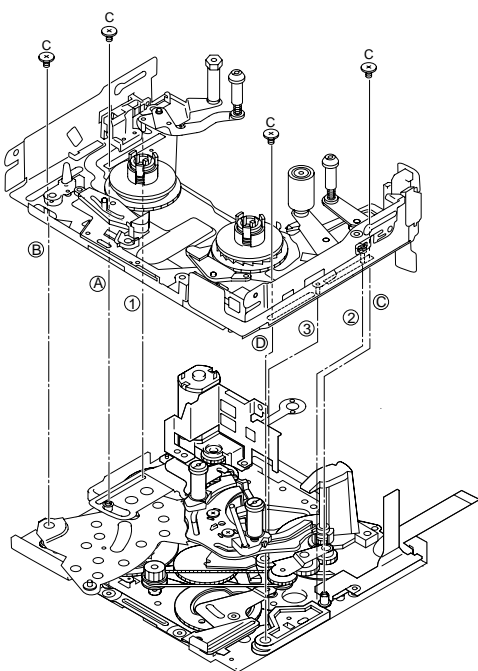
Note 2: After lightly tightening (428) arm area against deformation, apply screw-lock on the tip of the shaft.

	Item	Tightening torque	Quantity
B	CWø1.2-ø3.0-t0.25		1
F	S Tight · M1.4 x L2	40mN·m	1
H	CWø0.7-ø2.2-t0.25		2
K	Special head screw · M1.4 x L2	40mN·m	1
L	Special screw with step · M1.4 x L1	40mN·m	1
M	Type 2 minuteness · M1.4 x L1	40mN·m	1
N	CWø0.7-ø1.8-t0.1		2
O	Wø1.2-ø2.5-t0.3		2

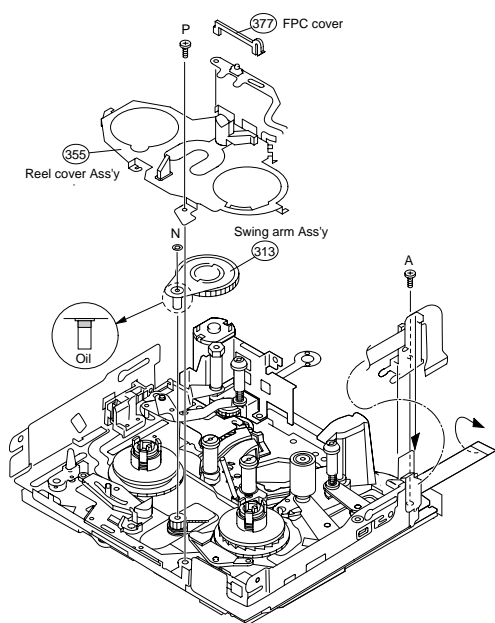
9-5-3. Main chassis assembly and slide chassis assembly assembling method

- (1) Enter the coupling mode. (In this position, the cam groove of the T arm operation lever in the figure is parallel to the side of the main chassis, and the poll base is slightly moved.)
- (2) Insert the slide chassis side operation pins (① tension arm, ② Tu guide arm, ③ pinch lever) in the position shown below at the main chassis side, move the slide chassis in the arrow direction, using ④ to ⑥ as guides, insert the loading lever operation pin into the groove of slide chassis, and install with the 4 screws.

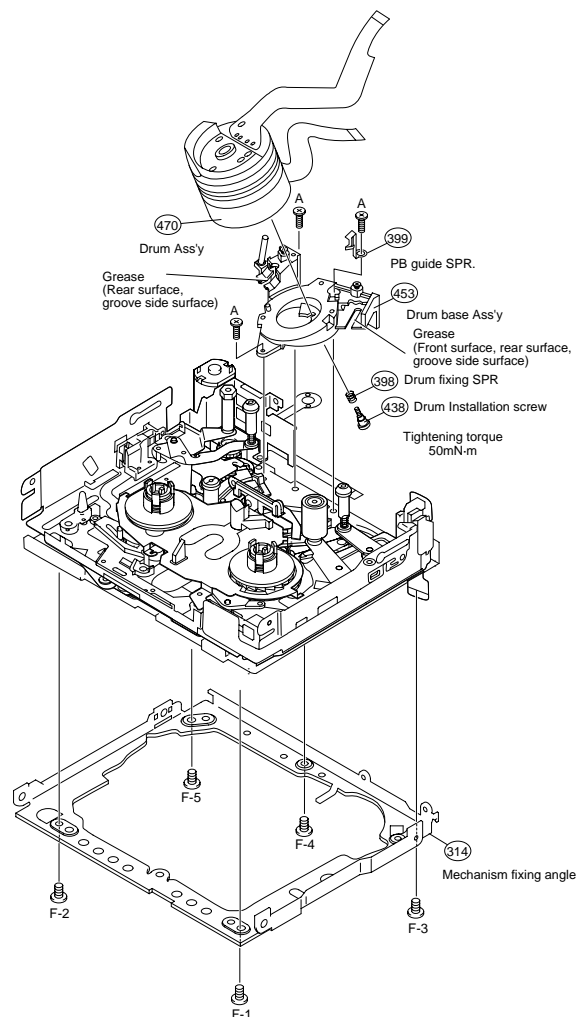
1.



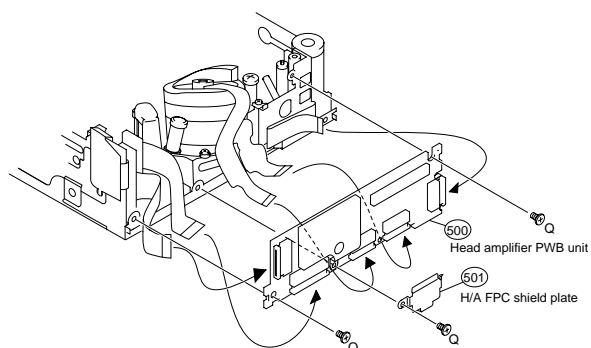
2.



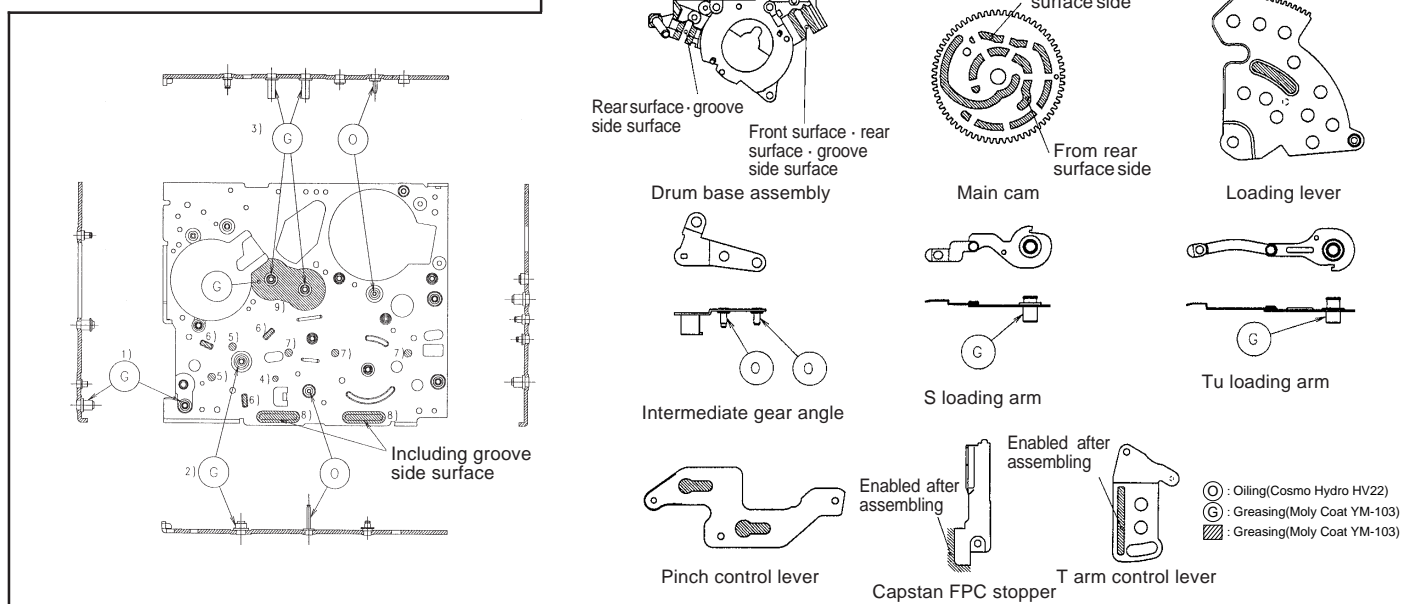
3.



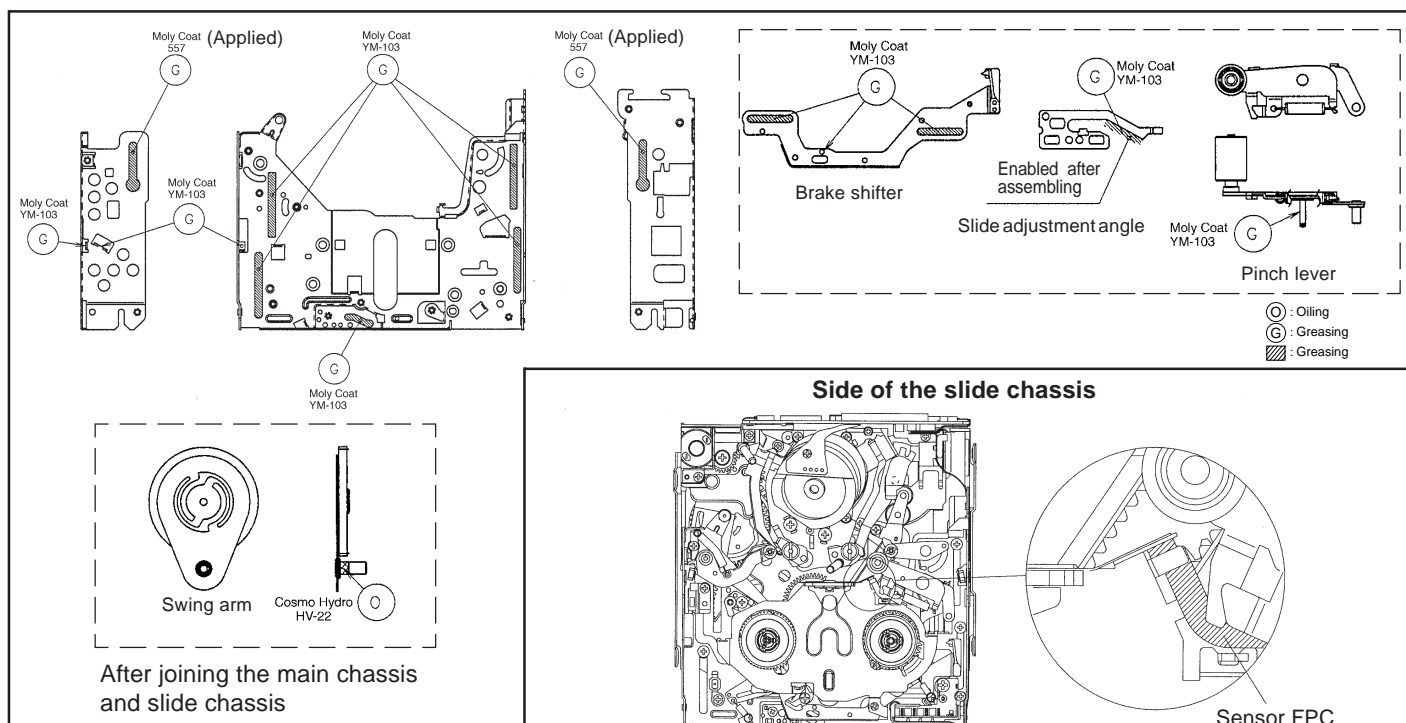
4.



GREASE/OIL APPLICATION



Side of the main chassis



Side of the slide chassis

9-6. Removing the cassette

- (1) Apply DC3V to the loading motor unload slightly.
- (2) After the tape is slackened, turn the rotor (lower side of mechanism) of capstan motor to tighten the tape. (Arrow direction, Fig. 1)
- (3) Repeat the operations (1) and (2). After the pole base has been completely unloaded, ascertain that the tape is not loose.
- (4) Finally apply again DC3V to the loading motor, so that the cassette controller ejects.
- (5) Take out the cassette.

Note) DC3V is applied to the loading motor as shown Fig 1. Then, the mechanism moves in the unloading direction.

Sensor FPC wiring

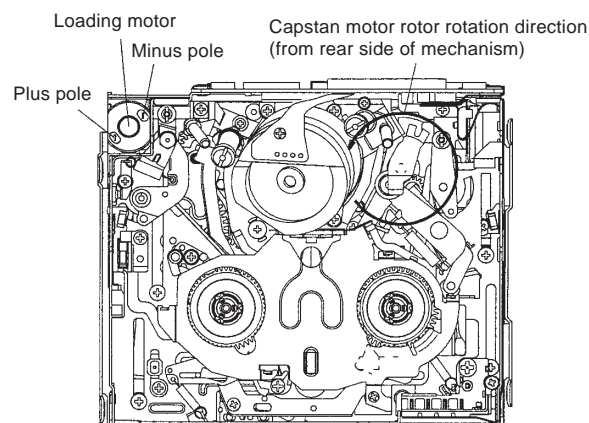


Fig. 1

10. ADJUSTING THE ELECTRICAL CIRCUITS

Before starting the electric circuit adjustment

- The adjustment methods described herein are used, in most cases, when the expendable mechanical parts, including the video head, have been replaced, at which time the electrical circuits need to be readjusted. Before adjusting the electrical circuits, make sure that the mechanism works properly (i.e., the mechanism is properly adjusted). In case of the occurrence of any problem to the electrical circuits, be sure to use the specified measuring instruments to locate the area to which the problem is occurring, and then take the necessary action, including repair, replacement or adjustment, exactly as instructed in the electrical adjustment methods that will follow.

Do not attempt to make adjustments without using the proper measuring instruments.

- This machine is configured so that the electrical circuits inside its PWB unit are composed, for the most part, of high-density, small surface-mounted component parts for downsized machine body.

To perform repair service or parts replacement, do so using a soldering iron, but in as short a time as possible; this is because surface-mounted component parts are generally so small in size and susceptible to heat, as compared with the large discrete parts used in TV sets, desk-top video decks, etc., that attempting to heat their electrodes for a longer time than is necessary with a soldering iron may result in their becoming defective.

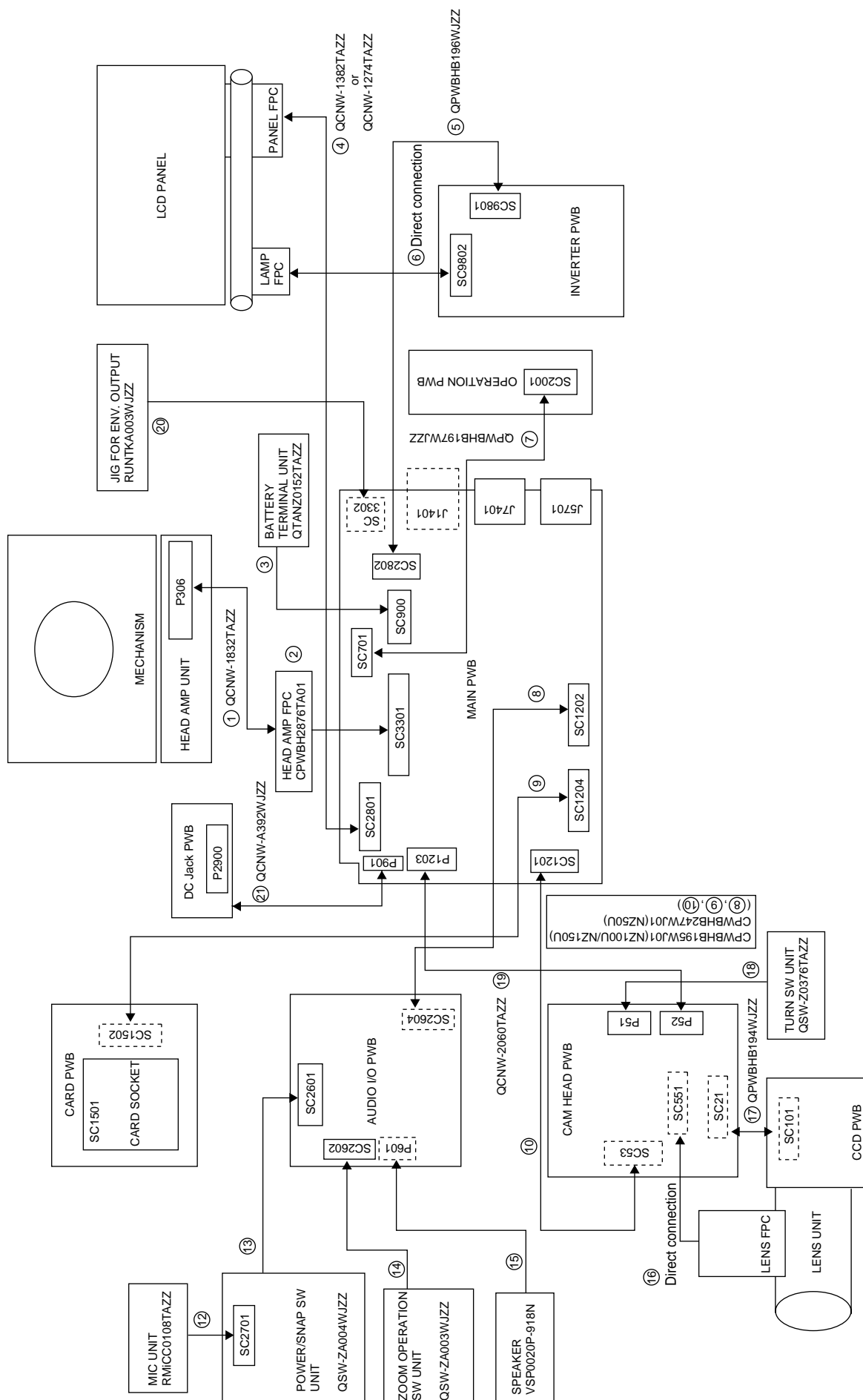
This applies particularly when replacing the laminated chip capacitors.

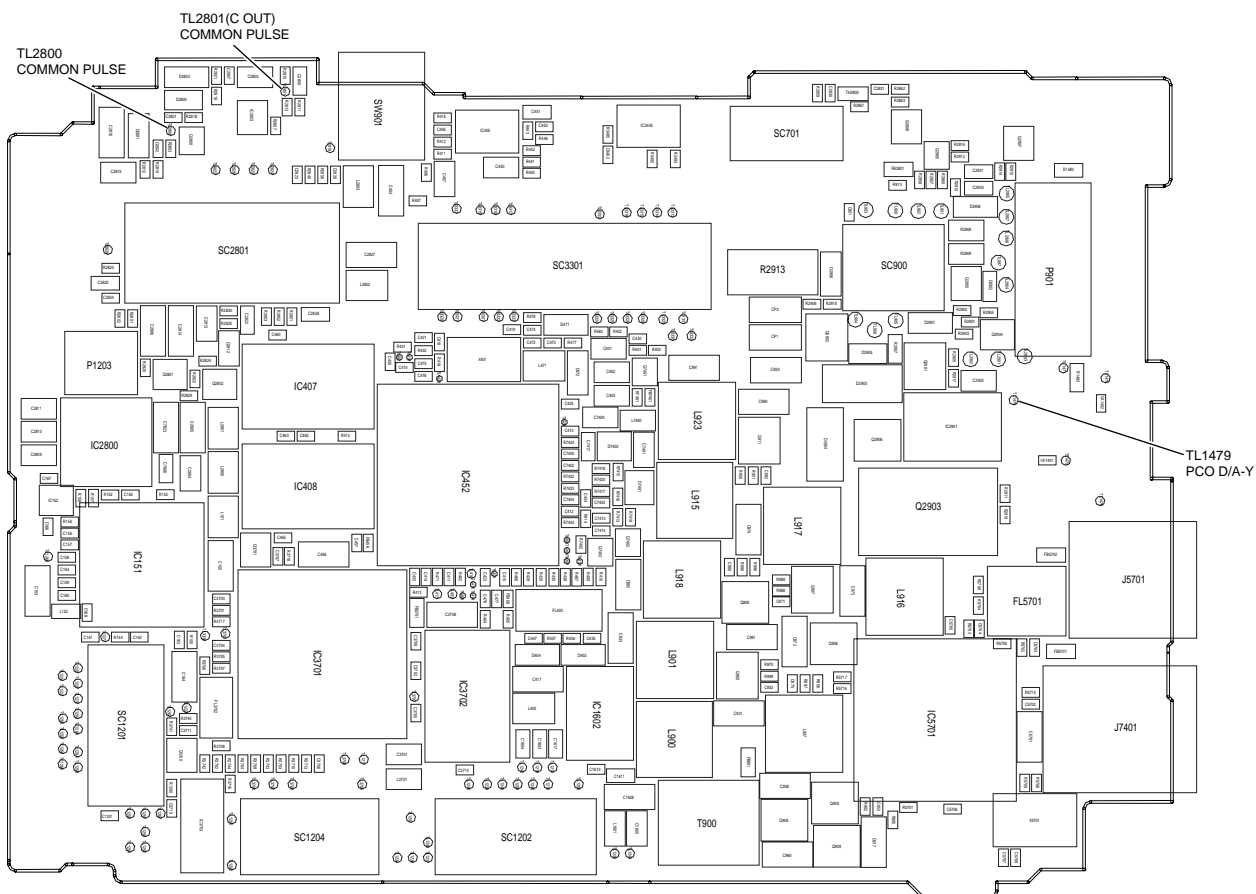
For this purpose, ceramic soldering irons with a temperature regulator are recommended (iron tip temperature 250°C and soldering time 5 seconds or shorter).

VL-NZ50U/NZ100U/NZ150U Specifications of service jigs

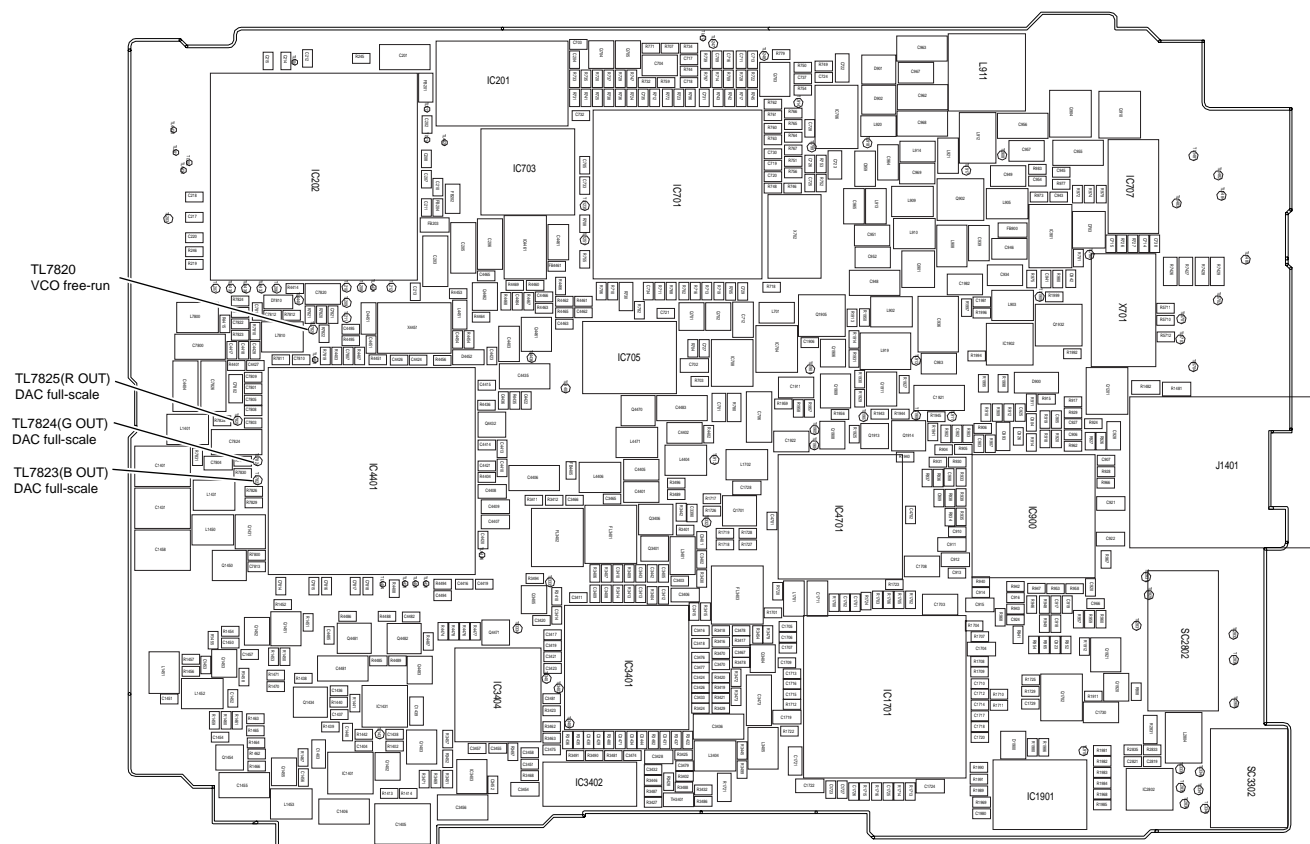
No.	Connection section	Connector REF. No.	No. of pins	New or Continuation	Part cord	Price code
1	H/A_PWB-H/A_FPC	P306←	80B-B		QCNW-1832TAZZ	BV
2	H/A_FPC-Main	←SC3301	80B-B		CPWBHB2876TA01 Product unit use	AS
3	Main-Battery Terminal	SC900←	20B-B		QTANZ0152TAZZ Product unit use	AN
4	Main-LCD Panel	SC2801-LCD Panel	24		QCNW-1382TAZZ or QCNW-1274TAZZ	BD AZ
5	Main-Inverter PWB	SC2802-SC9801	9	N	QPWBHB196WJZZ	AD
6	Inverter-Lamp Unit	SC9802-LAMP	4		Direct connection : High tension caution	—
7	Main-Operation PWB	SC701-SC2001	6		QPWBHB197WJZZ Product unit use	AD
8	Main-AIO PWB	SC1202-SC2604	33		CPWBHB195WJ01(NZ100U/NZ150U) CPWBHB247WJ01(NZ50U) Product unit use	AU AR
9	Main-Card PWB	SC1204-SC1502	27		CPWBHB195WJ01(NZ100U/NZ150U) CPWBHB247WJ01(NZ50U) Product unit use	AU AR
10	Main-Cam Head	SC1201-SC53	33		CPWBHB195WJ01(NZ100U/NZ150U) CPWBHB247WJ01(NZ50U) Product unit use	AU AR
12	Power/Snap SW-Mic Unit	SC2701←	4		RMiCC0108TAZZ Product unit use	AP
13	AIO-Power/Snap SW Unit	SC2601←	10		QSW-ZA004WJZZ Product unit use	AW
14	AIO-Zoom Ope SW Unit	SC2602←	11		QSW-ZA003WJZZ Product unit use	AY
15	AIO-Speaker	P601←	2		VSP0020P-918N Product unit use	AL
16	Cam Head-Lens	SC551←	24		Direct connection	—
17	Cam Head-CCD PWB	SC101-SC21	33		QPWBHB194WJZZ Product unit use	AD
18	Cam Head-Turn SW Unit	P51←	2		QSW-Z0376TAZZ Product unit use	AF
19	Cam Head-Main	P52-P1203	12		QCNW-2060TAZZ Product unit use	AD
20	TP Jig for Envelope confirmation	SC3302←	10PB-B		RUNTKA003WJZZ	BF
21	Main-DC Terminal_PWB	P901-P2900	6		QCNW-A392WJZZ	AE

VL-NZ50U/NZ100U/NZ150U Service jig configuration

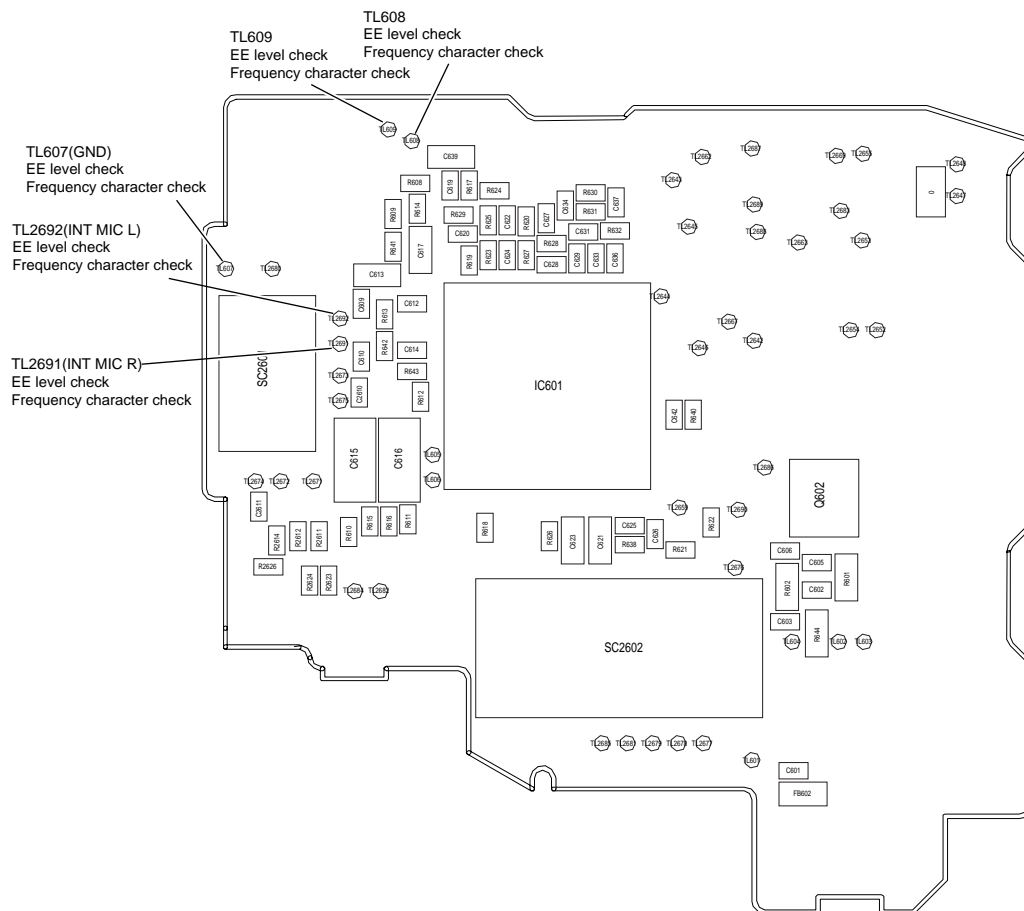




(Wiring board diagram: Main Side B)



(Wiring board diagram: AIO Side B)



[Making adjustments]

Adjusting the servo system controller and related parts

1. Setting the system codes

Replacement of IC705 E²PROM requires the following data to be set in this order.

[Procedure]

Set the unit to the VCR mode and set the data for each address.

Code	1. Model code			2. Destination code		3. Specification code			4. Menu selection code		5. Software switching code		6. Calender switching	
Address		01	09	02	0A		03	0B	04	0C	05	0D	07	0F
Data	NZ150U	07	F8	01	FE	NZ150U	15	EA	00	FF	00	FF	02	FD
	NZ100U/C	04	FB			NZ100U/C	15	EA						
	NZ100K	04	FB			NZ100K	1D	E2						
	NZ50U/C	00	FF			NZ50U/C	37	C8						
	NZ50K	00	FF			NZ50K	3F	C0						

When replacing the IC705 E²PROM, first make the following settings and then start the adjustments.

(1) Electromagnetic conversion

Address	27	28	2B	*105	25	26
Data	40	90	90	80	40	90

* The address uses only when replacing the IC302.

• Adjustment with automatic machine

Mode	VCR ADJ mode
Procedure	1) Using the 12 command, set the VCR adjustment mode. 2) Using the 20 command, give the E ² PROM write permission. 3) Set the system code with the 22 command for each type. 4) Using the command, set write inhibition. 5) Using the command, cancel the adjustment mode.
Examples	• During E ² PROM (IC705) replacement.

• Manual adjustment

Mode	VCR ADJ mode
Procedure	1) Set the CAM/OFF/VCR selection switch to VCR. 2) Press "CONTINUE" → "VCR adjustment" on the remote controller to set the VCR adjustment mode. (At this time an indication "VCR ADJ" appears at the left lower side.) Enter a setting corresponding to the address. <Setting method> 3) Adjust the address by moving up and down the blinking numeral with the FF and REW key, and fix the address by pressing the PB key. 4) Adjust to the setting by moving up and down the blinking numeral with the FF or REW key, and set data by pressing the PB key. 5) Press the STOP key to set the address set state. 6) Repeat the operations 3), 4) and 5) as much as input addresses. After completion of input of all items hold down the "CONTINUE" key to cancel the VCR adjustment mode. 7) Set the CAM/OFF/VCR selection switch to OFF.
Examples	• During E ² PROM (IC705) replacement.

2. HSWP adjustment

Mode	VCR ADJ mode
Procedure	1) Play back the alignment tape in the video mode. 2) Press the "CONTINUE" and "HSWP ADJ" keys on the adjustment remote control in this order. → This executes the HSWP adjustment. When the adjustment is successful, the LCD lights up [OK] and the cassette is automatically ejected. If not properly adjusted, the LCD lights up [NG].
Examples	• During mechanism replacement. • During E ² PROM replacement (IC302 inside the head amplifier circuit board).

3. SHUT OFF adjustment

Mode	VCR ADJ mode
Procedure	1) Load a recordable tape, and set the camera mode. (Set TL911 to GND or SW901 to ON.) 2) Press the "CONTINUE" and then the "TEST SEL" on the remote control for adjustment to enter the TEST mode (T-01 blinks). 3) Select T-03 with the FF or REW key and then press the PB key. 4) Observing the power voltage from TL2905(-), set it so that TL904(+) obtains $5.95V \pm 50mV$. 5) Press the MENU button on the main unit. Turn off the power and the adjustment is completed.
Examples	• During microcomputer (IC701) , REGULATOR (IC704) or E ² PROM (IC705) replacement.

ADJUSTING THE ELECTROMAGNETIC CONVERSION CIRCUIT SYSTEM**1. PLL VCO adjustment**

Mode	VCR ADJ mode
Procedure	1) Playback the alignment tape (or a self-recorded tape). 2) Call the adjustment mode (V-ADJ). 3) Set the address "2A" and call the data. 4) Set the called data with the FF/REW key to the point where the playback screen appears. (At this time, the screen full of block noise is OK.)
Examples	• During E ² PROM replacement. • During circuit board (Main) replacement.

2. Phase and equalizer adjustment → (Performed in the VCR mode)

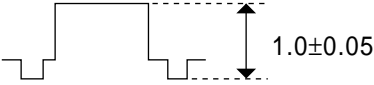
Mode	VCR ADJ mode											
Procedure	<div><div>1) Load a self-recorded tape into the deck.</div><div>2) After playback for 3 minutes, select the test mode 0F using the remote control for adjustment to start the automatic adjustment. (The following sequence is automatically performed.)</div><div><div><div>The built-in VI/O colour bar is recorded.</div><div>⇒</div><div>VS REW</div><div>⇒</div><div>PB</div><div>⇒</div><div>Phase and equalizer are adjusted automatically.</div><div>⇒</div><div>Judgment</div><div>⇒</div><div><div>OK: Blue LCD comes on.</div><div>⇒</div><div>Tape is EJECT.</div><div>NG: Red LCD comes on.</div></div></div></div><div><div>3) ON/OFF does a power source.</div><div>4) Error rate check</div><div>Select and fix the TEST MODE 0B on the adjustment remote control.</div><div>5) Manual adjustment method (video adjustment mode)</div><div>* Perform this adjustment with the self-recording/playback in the LP mode.</div><div>For phase, vary the data for the address 26 and 2B, and for equalizer, vary the data for the address 25 and 27, to set the error rate is made as small as possible.</div></div><div><div><table><tr><td></td><td>Phase</td><td>Equalizer</td></tr><tr><td>H ch side</td><td>2B</td><td>27</td></tr><tr><td>L ch side</td><td>26</td><td>25</td></tr></table><div><div>Synchronization error</div><div>Error rate</div><div><div>H</div><div>L</div><div><div><div><div></div><div></div><div></div><div></div></div><div><div></div><div></div><div></div><div></div></div><div><div></div><div></div><div></div><div></div></div></div></div><div><div>Synchronization error</div><div>Error rate</div><div>20 or less</div><div>200 or less (SP Mode)</div><div>330 or less (LP Mode)</div></div></div></div></div><tr><td>Examples</td><td>• During mechanism replacement. • During circuit board (Main) replacement. • During E²PROM replacement.</td></tr></div></div>		Phase	Equalizer	H ch side	2B	27	L ch side	26	25	Examples	• During mechanism replacement. • During circuit board (Main) replacement. • During E ² PROM replacement.
	Phase	Equalizer										
H ch side	2B	27										
L ch side	26	25										
Examples	• During mechanism replacement. • During circuit board (Main) replacement. • During E ² PROM replacement.											

ADJUSTING THE VIDEO I/O CIRCUIT SYSTEM

(Wiring board diagram: Main Side A)



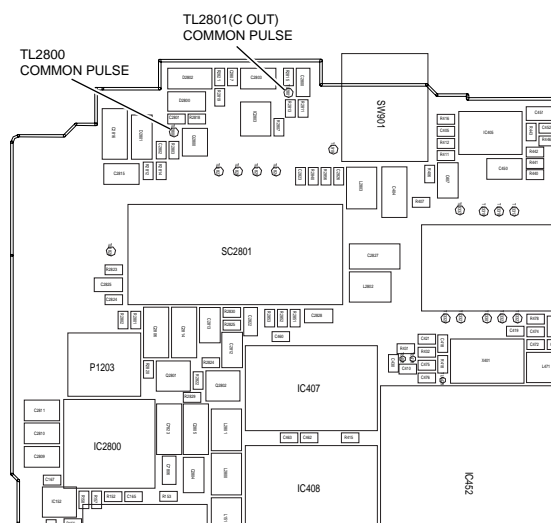
1. PCO D/A-Y adjustment

Test point	TL1479 (connected to oscilloscope)	Address	VCR ADJ 566/567
Mode	VCR STOP mode		
Procedure	<div>1) Connect the AVS cable and then connect it to the monitor (TO).</div> <div>2) Call the adjustment mode (V-ADJ).</div> <div>3) Set the address to "566", and call the data. (100% white signal is output.)</div> <div>4) Vary the data with the FF and REW keys to set the signal appearing at TL1479 to 1.0Vp-p ± 0.05Vp-p.</div> <div>5) Write a value subtracting -6h from the adjustment data of the address 566h in the address 567h.</div> <div></div>		
Examples	• During E²PROM(IC705) replacement. • During IC4401 replacement. • During IC1401 replacement.		

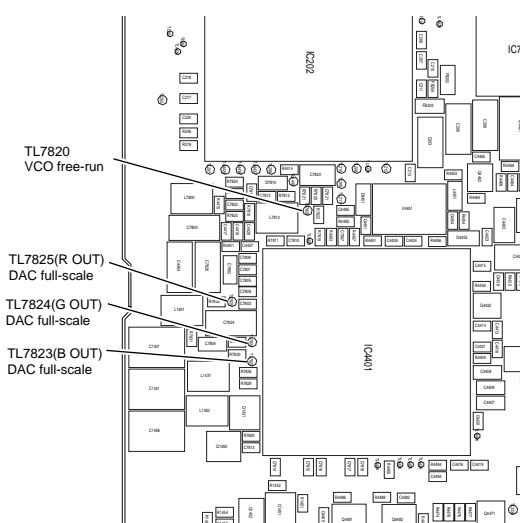
ADJUSTING THE LCD CIRCUIT

* To make this adjustment, set the backlight switch to the "NORMAL" position.

(Wiring board diagram: Main Side A)



(Wiring board diagram: Main Side B)



Adjustment procedure and connecting same as the VCR section.

1. VCO free-run adjustment

Test point	TL7820	Address	VCR ADJ 32
Mode	VCR AV input		
Procedure	1) Set the data of the addresses 523/524/525/526 to A9/90/80/80, respectively. (White 100%) 2) Connect the digital voltmeter to TL7820, and adjust DC voltage value to the specified adjustment value with VCR ADJ 32. 3) Return the data of the addresses 523/524/525/526 to the initial values. (Initial values: A1/10/80/80)		
Adjustment rating	2.00 ± 0.1V		
Examples	• During E ² PROM (IC705) replacement. • During VIO ENG (IC4401) replacement.		


2. DAC full-scale adjustment

Test point	TL7825(R OUT), TL7824(G OUT), TL7823(B OUT)		
Address	VCR ADJ 5E0(R), VCR ADJ 5DF(G), VCR ADJ 5DE(B)		
Mode	VCR AV input		
Procedure	1) Set the VCR ADJ 585/59A/5D0 to 00/77/00. (At this time, LCD can not be displayed.) 2) With the VCR ADJ 5E0, adjust the output voltage of TL7825 and the DC voltage value of the digital voltmeter to the specified adjustment values. 3) Similarly with the VCR ADJ 5DF/5DE, adjust the output voltage of TL7824/7823 and the DC voltage value of the digital voltmeter to the specified adjustment values. (Same as Item (2)) 4) Return the VCR ADJ 585/59A/5D0 to the initial value. (Initial values: C5/7F/28)		
Adjustment rating	0.78V ± 10mV		
Examples	• During E ² PROM (IC705) replacement. • During VIO ENG (IC4401) replacement.		

3. COMMON PULSE adjustment

Test point	TL2801(C OUT)	Address	VCR ADJ 29(C)
Mode	VCR AV input		
Procedure	1) Connect TL2800 to GND. 2) With VCR ADJ 29, adjust the output voltage of TL2801 and the DC voltage value of the digital voltmeter to the specified adjustment values.		
Adjustment rating	6.95V ± 50mV		
Examples	• During E ² PROM (IC705) replacement.		

4. COM-BIAS adjustment

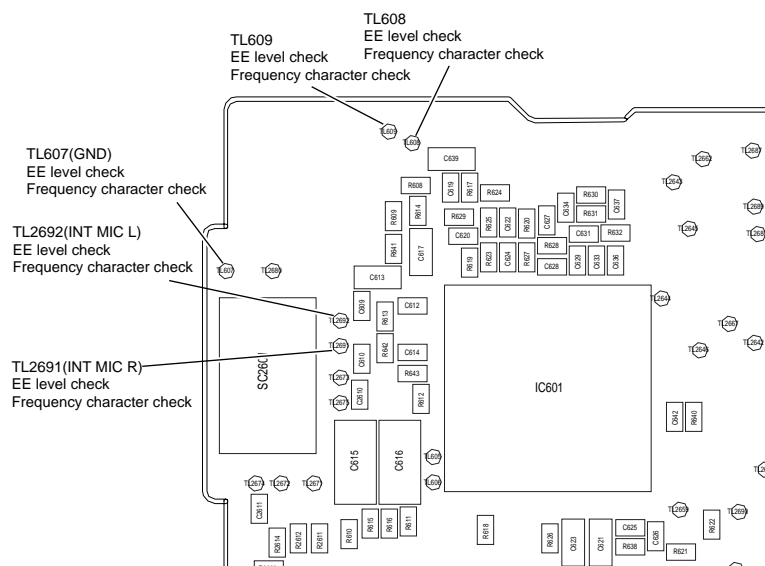
Test point	LCD panel display surface	Address	VCR ADJ 33
Mode	VCR AV input		
Procedure	1) Set the data of the address 582 to AF. 2) Set up the illuminance meter (TOPCON IM-3) on the LCD panel surface. (The outside light must not enter.) 3) Minimize the ripple of the output waveform of the illuminance meter. 4) Return the data of the address 582 to the initial value. (Initial value: 40)		
Adjustment rating	Minimum  Response time : 0.6sec		
Remark	Make this adjustment after 5-minute or longer aging.		
Examples	• During LCD Panel replacement. • During IC705 replacement.		

5. White Balance adjustment

Test point	LCD panel display surface	Address	VCR ADJ 586, VCR ADJ 588
Mode	VCR AV input		
Procedure	1) Set the data of the address 582 to AF. 2) Input the white 40% signal to the standard monitor, and adjust it to become equal to that of the screen. 3) Return the data of the address 582 to the initial value. (Initial value: 40)		
Adjustment rating	Standard monitor		
Remark	Make this adjustment after 5-minute or longer aging.		
Examples	• During LCD monitor replacement. LCD Panel • During IC4401, IC705 replacement.		

ADJUSTING THE MIC AMP CIRCUIT

(Wiring board diagram: AIO Side B)



1. EE level check

Measuring instrument	Valve voltmeter	Test point	TL608, TL609
Mode	P-ON (CAM)	Adjustment rating	-8dBs \pm 3dB
Test signal	1kHz -54dBs sine wave		
Procedure	1) Input 1kHz, -54dBs sine wave into TL2692(INT MIC L) and TL2691(INT MIC R). 2) Make sure that the signal level of TL608 Audio-L out and TL609 Audio-R out is within the standard limits.		
Remark	TL607: GND		

2. Frequency character check

Measuring instrument	Valve voltmeter	Test point	TL608, TL609
Mode	P-ON (CAM)	Adjustment rating	(1kHz standard) 100Hz: -9dBs \pm 3dB 10kHz: -1dBs \pm 3dB
Test signal	100Hz, 10kHz -54dBs sine wave		
Procedure	1) Input 100Hz, -54dBs sine wave and then 10kHz, -54dBs sine wave into TL2692(INT MIC L) and TL2691(INT MIC R). 2) At this time make sure that the signal level of TL608 Audio-L out and TL609 Audio-R out is within the standard limits (1kHz standard).		
Remark	TL607: GND		

DV INTERFACE (IEEE1394) ID SETTING

This unit has a DV interface function conforming to IEEE1394. Therefore, each individual ID number must be used for each unit. Since this ID is written on the E²PROM (IC302) on the head amp PWB, the ID must be newly written when replacing this IC or the head amp PWB.

Address	180, 17F, 17E	Mode	VCR
Adjustment rating	ID number obtained from the URL below		
Procedure	1) Refer to the ID code application below. 2) Set the data acquired in step 1) to the corresponding address in the VCR adjustment mode. * Download an ID number or write it on the main unit according to the notice from the AV Systems Group "Issue No. S8-001".		
Examples	• During E ² PROM (IC302: on the H/A unit) replacement. • During the H/A unit (RAMP-0035TAN0) replacement.		

■ ID code is acquired

1. Connect with the EUI48/64 ID code control system.
- (1) Start the Internet Explorer or Netscape Navigator.
- (2) Access the following address.
(URL:http://www.rcg.kami.sharp.co.jp/quics/e_index.html)
Select the "EUI48/64 ID code control system" from the "Service" item.
- Note:** If you want to establish a connection by directly inputting the URL, please input the following.
URL:http://www1.rcg.kami.sharp.co.jp:7000/adrs_agt/adrs_dba/ide00010.main
The login screen will appear.

EUI 48 / 64 ID code control system

Please enter user ID and password

User ID

Password

Login

Usage precautions

1. Those who have acquired ID numbers must manage the acquired ID codes on their own responsibility.
Their names and departments or section to which they belong are stored as history data in the memory.

2. JavaScript is used for display selection handing.
Therefore, the system may not operate properly on some browsers.
To operate the system, use any of the following browsers.
Internet Explorer 4.01SP1 or higher versions/Netscape Navigator 4.04 or higher versions

3. Do not click the back button displayed on the above browser screen.
If you click it, the system may not operate properly.

4. If the search results are displayed at a personal computer terminal with the Japanese fonts not installed,
the Japanese characters are not displayed correctly.

If you have any question, please contact to below

Reliability Control Group

E-mail : eui@cmn.hirano.sharp.co.jp

Home

- (3) For the [User ID], input the [Password].
Click on [Login].

EUI 48 / 64 ID code control system

Please enter user ID and password

User ID

Password

Login

Usage precautions

1. Those who have acquired ID numbers must manage the acquired ID codes on their own responsibility.
Their names and departments or section to which they belong are stored as history data in the memory.

2. JavaScript is used for display selection handing.
Therefore, the system may not operate properly on some browsers.
To operate the system, use any of the following browsers.
Internet Explorer 4.01SP1 or higher versions/Netscape Navigator 4.04 or higher versions

3. Do not click the back button displayed on the above browser screen.
If you click it, the system may not operate properly.

4. If the search results are displayed at a personal computer terminal with the Japanese fonts not installed,
the Japanese characters are not displayed correctly.

If you have any question, please contact to below

Reliability Control Group

E-mail : eui@cmn.hirano.sharp.co.jp

Home

- (4) Click on [EUI 64 (IEEE 1394)] from the
[1. Application for acquisition of ID].

Click

EUI 48 / 64 ID code control system

Click the button.

1.Application for acquisition of ID

EUI 48

EUI 64 (IEEE1394)

EUI 64 (IrDA)

2.Inquiry/search

EUI 48

EUI 64

Home

(5) Click on [Repair use].

Click

EUI 64 (IEEE1394) Application for acquisition of ID	
Click the button.	
<input type="button" value="Trial production use"/>	<input type="button" value="Repair use"/>
<input type="button" value="Back to menu"/>	

- (6) Input the necessary information for the application.
For the indispensable input items, be sure to input them.
Select the [Group/company] and [Kind name] from the list.
Input the [Model name].
Input the [Serial number].
Input the [Site/department of repair].

EUI 64 (IEEE1394) Application for acquisition of ID / Repair use		
Input the following items.		
Input date	00-FEB-01	
User ID code	00 00 00	
Name	TaroYamada	Input of half-sized characters.
Group/company	Audio-Visual Systems Group	Select from the list.
Kind name	ViewCam with LCD	Select from the list.
Model name	VL-NZ○○○○	Input of half-sized characters. (Compulsory input items. Do not input "-" (hyphens)).
Serial number	○○○○○○○	Input of half-sized characters. (Compulsory input items.
site/department of repair	SHARP	Input of half-sized characters. (Compulsory input items.
<input type="button" value="motion"/>		
<input type="button" value="back to select menu"/>		<input type="button" value="Back to menu"/>

- (7) Click on [motion].
The confirmation screen will appear.

EUI 64 (IEEE1394) Application for acquisition of ID / Repair use		
Input the following items.		
Input date	00-FEB-01	
User ID code	00 00 00	
Name	TaroYamada	Input of half-sized characters.
Group/company	Audio-Visual Systems Group	Select from the list.
Kind name	ViewCam with LCD	Select from the list.
Model name	VL-NZ○○○○	Input of half-sized characters. (Compulsory input items. Do not input "-" (hyphens)).
Serial number	○○○○○○○	Input of half-sized characters. (Compulsory input items.
site/department of repair	SHARP	Input of half-sized characters. (Compulsory input items.
<input type="button" value="motion"/>		
<input type="button" value="back to select menu"/>		<input type="button" value="Back to menu"/>

(8) Click on [Yes].

EUI 64 (IEEE1394) Application for acquisition of ID/Repair use	
Input date	00-FEB-01
User ID code	00 00 00
Name	TaroYamada
Group/company	Audio-Visual Systems Group
Kind name	ViewCam with LCD
Model name	VL-NZ○○○○
serial number	○○○○○○○
site/department of repair	SHARP
EUI 64 (IEEE1394) Application for acquisition of ID/Repair use You will acquire an ID code based on the above information. Are you sure?	
<input type="button" value="Yes"/> <input type="button" value="No"/>	

2. Print the application result.

- (1) Print out the application result screen.
Control the application result as evidence.
To print it, select "Print (P)" from the "File (F)" in the menu bar or click on the print button in the tool bar.
- (2) Click on [Menu] to complete the application.
If you create applications in succession, repeat steps (1)~(8).
To complete it, click on [End] in the menu screen.

MODEL ID SETTING

Address	VCR ADJ FD, FE, FF	Mode	VCR STOP mode
Procedure	1) Set the unit to the VCR adjustment mode with command 12. 2) Give E ² PROM write enable with command 20. 3) Assign a MODEL ID to each address.		
Examples	• During E ² PROM (IC705) replacement.		

Address	FDh	FEh	FFh	Model
Data	10	20	2B	NZ50U/C/K
			27	NZ100U/C
			32	NZ150U

10-2. Camera Section Adjustments

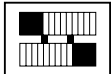


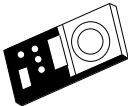
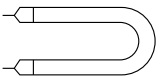
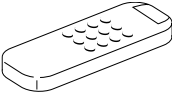
10-2-1. Camera section service

- (1) Camera adjustment is performed after the set has been completed.
- (2) Subjects, measuring instruments and jigs needed for camera section service and adjustments

<ul style="list-style-type: none">• Gray scale chart• Color bar chart• Oscilloscope• Digital voltmeter• Halogen lamp: 2 pcs.• Vector scope	<ul style="list-style-type: none">• Frequency counter• Illumination meter• Color temperature meter• Color temperature conversion filter• HOYA "LB-165"• Color video monitor	<ul style="list-style-type: none">• Video output cable• AC adapter• Extension cables• Remote control unit for servicing
---	--	--

10-2-2. List of camera jigs and tools

Configuration
<Note: The entries of list> 1. Name 2. Part No. 3. Code

 1. Gray scale chart (390 x 520 mm) 2. JiGCHART-1 3. CP	 1. Color bar chart (240 x 320 mm) 2. JiGCHART-4 3. DA	 1. Illumination meter (0 to 3000 lux) 2. JiGMETER-1 3. CT	 1. Color temperature meter (1600 to 40000 degrees K) 2. JiGMETER-2 3. EL
1. Color temperature conversion filter (3200 degrees K ⇒ 6800 degrees K) 2. JiGHOYA-LB165 3. BN	 1. PC plate connector drawer 2. JiGTH-SS10 3. AW	 1. Remote control until for servicing 2. RRMCG0033TASA 3. BT	

10-2-3. Adjusting the camera unit

- (1) Preparations for adjustments and items to be checked
- 1) Set up the light box so that the entire pattern is evenly lit. Set the color temperature to 3200°K.
- 2) Use test patterns that are not dirty nor discoloured.
- 3) If the electrical circuitry gets in trouble, be sure to pinpoint the trouble spot with a measuring instrument and repair or replace the defective part.

- (2) Remote control for servicing RRMCG0033TASA
- To adjust the camera section of this machine, the remote control for servicing (RRMCG0033TASA) is used. The adjustment is made in such a manner that the remote control writes necessary data by way of the microprocessor to the specific addresses on the E²PROM (IC705).

- 1) To adjust the camera:
- Press the "CONTINUE" key first and then the "CAM ADJ" key.
- This will show



on the LCD screen, thereby having the camera unit ready for the adjustments.

- 2) Descriptions of the displays

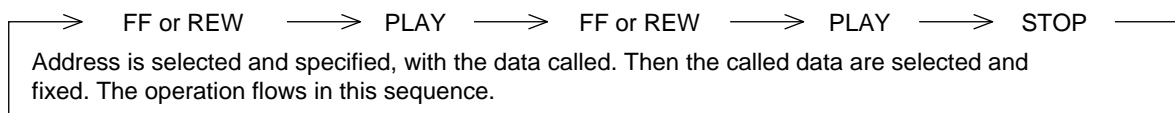


(Indicates the camera adjustment mode.)

- * The address values for this machine range from 0000 to 07FF.
- * The data include byte data (the last two digits are effective) and 2-byte data (the last three digits are effective).

- 3) Descriptions of the remote control keys
- "FF" key: Increases the address and data values.
- "REW" key: Decreases the address and data values.
- "PLAY" key: Specifies addresses and calls the data.
This key also fixes the data values.
- "STOP" key: Clears the data to enable the selection of address.

4) Operation flow



5) When the adjustment is complete:

Press the "CONTINUE" key to let the "CAM ADJ" display disappear from the screen.

Note: Before terminating the adjustments, make sure that the adjustment mode is neither the auto-focus function adjustment mode nor the camera signal system adjustment mode (these modes are mentioned later).

- Camera unit adjustment modes

The camera unit is adjusted in two types of modes: the auto-focus function adjustment mode and the camera signal system adjustment mode.

Note: E²PROM contains the adjustment item data as shown below. If it is changed, data rewriting and confirmation of latest data must be performed.

1) E²PROM(IC705) on the Main unit

Lens data and Signal system adjustment data

(3) Auto-focus function adjustment mode

- The camera unit uses a microprocessor-controlled auto-focus zoom lens.

The auto-focus circuit incorporated in this unit is designed to execute the image processing where the focusing action is done by taking advantage of the fact that the high-frequency components in the image signals increase as the focus intensifies. Moreover, to achieve high magnifying power with a small lens, the camera unit incorporates the inner focus system in which the focus is shifted by moving the master lens (rear lens) back and forth. This inner focus system is a full-range focus type by which the focus can be shifted from approximately 10 mm to the infinity. It should be noted, however, that since the closest subject distance at the telephoto end is fixed at 1.5 m, subjects in a closer range than 1.5 m at the telephoto end will be out of focus. For this reason, the unit is designed so the zoom control is automatically shifted to the wide angle side until the position is found where the subject can be focused on.

In the auto-focusing system of this unit, the following constitute the important factors:

- Master lens position detection data
- Iris position detection data
- Zoom lens position detection data

These detection data are handled and stored by the microprocessor, lens by lens, into the E²PROM.

Therefore, in the following cases, (3) auto-focus function adjustment is required:

- When the lens has been replaced
- When the CCD has been replaced
- When the E²PROM has been replaced
- When the CCD PWB and Camera PWB has been replaced

1) Shifting to the auto-focus function adjustment mode

Set the data for the address "0000" to "0001".



This makes the screen fade temporarily in white and shifts to the auto-focus function adjustment mode.

* When this adjustment mode has been shifted to, make the adjustment according to (5) Camera unit adjustment procedure.

* In this adjustment mode, the lens can not be operated.

2) Shifting to the normal operation mode

Set the data for the address "0000" to "00FF".



This makes the screen fade temporarily in white and shifts to the normal operation mode.



Press the "CONTINUE" key, and the "CAM ADJ" display goes out of the screen, enabling the normal operation.

(4) Camera signal system adjustment mode

In the camera signal system adjustment mode, the automatic white balance is disabled to allow for the adjustment of the camera unit. At this time, the white balance mode is fixed at the INDOORS mode and the focus mode is switched to the manual focus mode.

1) Shifting to the camera signal system adjustment mode

Set the data for the address "0000" to "0000".



This shifts the camera signal system adjustment mode.

* When this adjustment mode has been shifted to, make the adjustment according to (5) Camera unit adjustment procedure.

2) Shifting to the normal operation mode

Set the data for the address "0000" to "00FF".

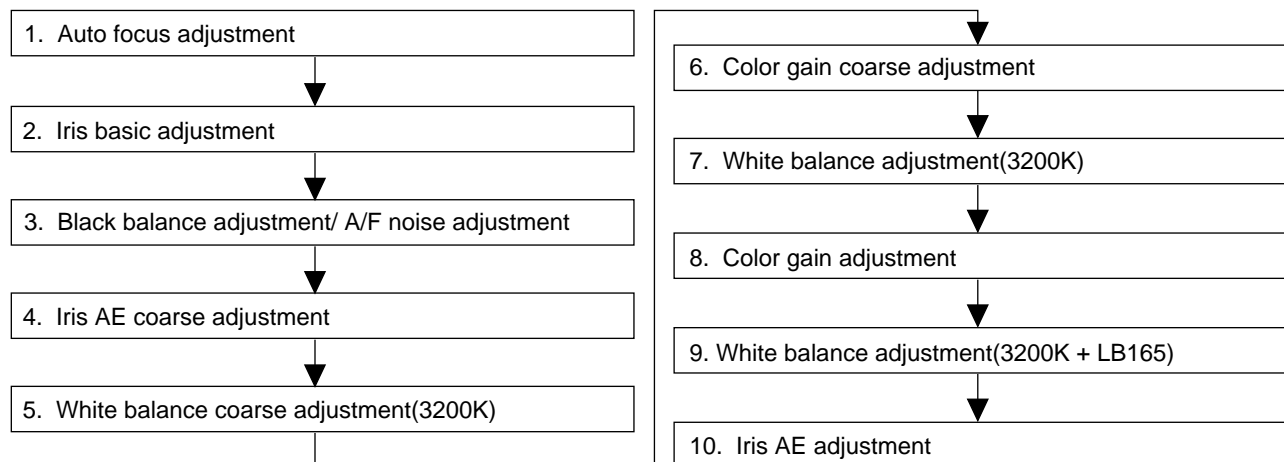


This shifts the mode to the normal operation mode.



Press the "CONTINUE" key, and the "CAM ADJ" display goes out of the screen, enabling the normal operation.

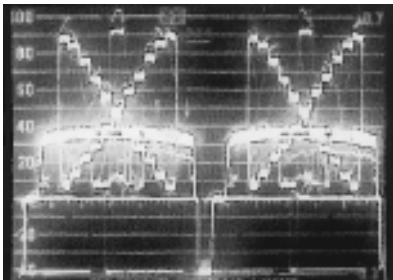
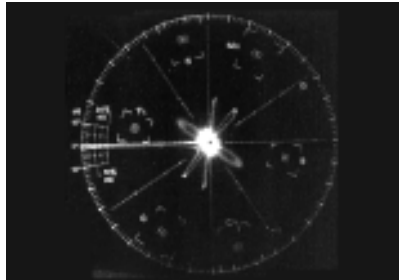
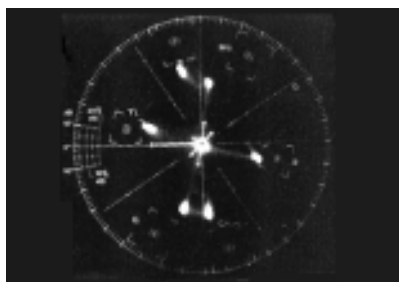
(5) Camera unit adjustment procedure

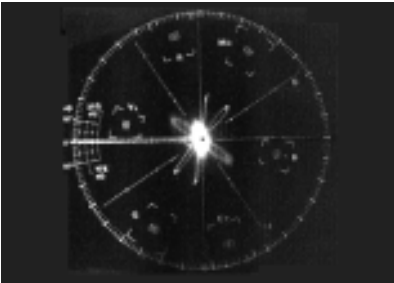
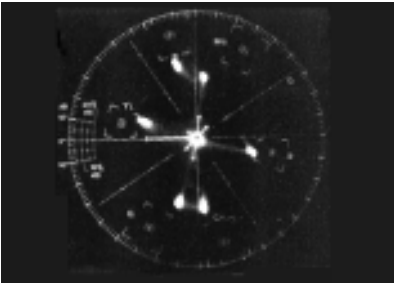
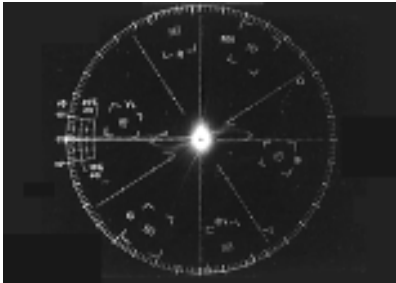
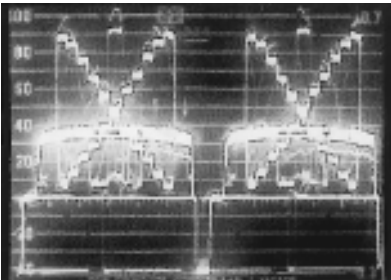


* The above 1. Auto-focus function adjustment is in the auto-focus function adjustment mode, whereas the other adjustments are made in the camera signal system adjustment mode.

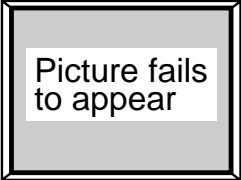
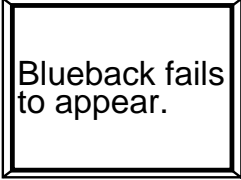

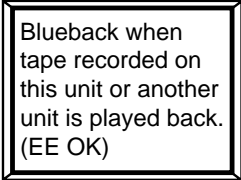
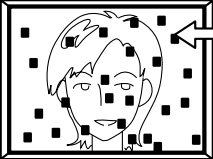
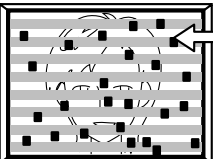

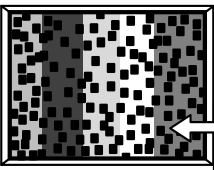
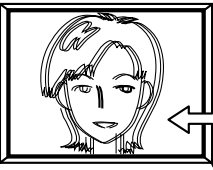
10-2-4. Adjustment procedures

Item	Adjustment method													
(1) Auto-focus adjustment	<p>Set the unit to the auto-focus function adjustment mode and write data to the address "0000" one after another. This executed the adjustments automatically. The items to be adjusted are as listed below. Every time an adjustment is made properly, the data "FF" is written to the address. After each adjustment, make sure that the adjustment has been made properly, and then go on to the next adjustment item.</p> <table><tr><th>Address</th><th>Data</th><th>Adjustment item</th></tr><tr><td rowspan="4">0000</td><td>0012</td><td>WIDE end adjustment</td></tr><tr><td>0006</td><td>WIDE end focus ∞ position adjustment</td></tr><tr><td>0008</td><td>TELE end focus ∞ position adjustment</td></tr><tr><td>000D</td><td>Zoom tracking adjustment</td></tr></table> <p>Note 1: To adjustment of ∞ position is executed by actually picking up the image of subject. For this adjustment use the subject with clear profile. Especially, if the adjustment of TELE end focus ∞ position is made without picking up the image of remote subject, adjustment failure may occur. Adjustment of WIDE end focus ∞ position: 3 m or more Adjustment of TELE end focus ∞ position: 50 m or more</p> <p>Note 2: In case of ∞ position adjustment the field depth is important to ensure the adjustment accuracy. If the field depth is high, the focus becomes too stable , which may cause incorrect adjustment of ∞ position. Therefore the adjustment must be made with low field depth (with iris opened).</p> <p>The iris can be opened with the high-speed shutter.</p> <ol style="list-style-type: none">1. It returns to the normal operation mode.2. In the normal operation mode, set the high-speed shutter mode until the iris is opened. (Refer to the operation manual.)3. Display “CAM ADJ” with the remote control for service.4. It shifts to the auto-focus adjustment mode.5. Perform the ∞ position adjustment.6. After completing the ∞ position adjustment, return the high-speed shutter mode to the normal mode.		Address	Data	Adjustment item	0000	0012	WIDE end adjustment	0006	WIDE end focus ∞ position adjustment	0008	TELE end focus ∞ position adjustment	000D	Zoom tracking adjustment
Address	Data	Adjustment item												
0000	0012	WIDE end adjustment												
	0006	WIDE end focus ∞ position adjustment												
	0008	TELE end focus ∞ position adjustment												
	000D	Zoom tracking adjustment												
(2) Iris basic adjustment	<p>This is for adjusting the operating point of the hole element installed in the iris meter of the lens.</p> <p>The adjustment is automatically done by sequentially writing the data at the address "0001" in the camera signal system adjustment mode. The items to be adjusted are as listed below. Every time an adjustment is made properly, the data "00FF" is written to the address.</p> <table><tr><th>Address</th><th>Data</th><th>Adjustment item</th></tr><tr><td rowspan="3">0001</td><td>0009</td><td>Hall offset adjustment</td></tr><tr><td>000A</td><td>Iris offset adjustment</td></tr><tr><td>000B</td><td>Iris close adjustment</td></tr></table> <p>In the camera signal system adjustment mode (write the data "□□ 00" to the address "0000"), set the unit to the adjustment mode.</p>		Address	Data	Adjustment item	0001	0009	Hall offset adjustment	000A	Iris offset adjustment	000B	Iris close adjustment		
Address	Data	Adjustment item												
0001	0009	Hall offset adjustment												
	000A	Iris offset adjustment												
	000B	Iris close adjustment												
(3) Black balance adjustment/ A/F noise adjustment	<ol style="list-style-type: none">1) Prior to the adjustment, initialize the data for the addresses "0026", "0028", "002A", "002C", "002E", "0030". Write "FF FF" to all of these address.2) Write the data "□□ 01" to the address "0001" This starts the adjustment automatically. When the adjustment is completed properly, the data "00FF" is written automatically.													

Item	Adjustment method																					
<p>(4) Iris AE coarse adjustment</p> <ul style="list-style-type: none">Measurement terminal: S terminal luminance signal output (75 Ω termination)Address: "0002" AE_CVTMeasuring instrument: Oscilloscope (horizontal sync)Object: Grey scaleData variation width: "0000" to "00FE"	<p>(1) Video output is observed with the oscilloscope in the grey scale standard record state, the data of address "0002" is rewritten, and the luminance signal level is adjusted white to $720 \pm 10\text{mVp-p}$.</p> <div><div>10IRE/div (71.4mV/div)</div></div>																					
<p>(5) White balance coarse adjustment (3200K)</p> <ul style="list-style-type: none">Measurement terminal: EE outputAddress: "0090" INDOOR_W/B_R "0092" INDOOR_W/B_BMeasuring instrument: Vector scopeObject: Grey scaleData variation width: "0000" to "03FF"	<p>(1) Indication on the vector scope is observed in the grey scale standard record state, data of address "0090" and "0092" are rewritten, and an adjustment is made so that the luminous dot is located in the position of burst ratio: R-Y $0 \pm 5\%$ B-Y $0 \pm 5\%$</p> <div></div>																					
<p>(6) Color gain coarse adjustment</p> <ul style="list-style-type: none">Measurement terminal: EE outputAddress: "0338" CGIN RYG "033A" CGIN BYG "033B" CGIN YLYG "0335" CMAT RYG "0333" CMAT BYG "0334" CMAT YLYGMeasuring instrument: Vector scopeObject: Color bar chartData variation width: "0000" to "00FF"	<p>(1) The color bar chart is imaged, and the picture angle is adjusted so as to get white level 630 mV. Indication on the vector scope is observed, the data of address "0338", "033A", "033B", "0335", "0333" and "0334" are rewritten, and setting is made so that the red and blue and yellow luminous dots are located in the following positions. (The gain of vector scope must be set on 75% amplitude point on the B-Y axis.)</p> <div></div> <table><tr><th colspan="3">Adjustment address</th></tr><tr><td>Red amplitude</td><td>1.58 ± 0.1 time (burst ratio)</td><td>: "0338"</td></tr><tr><td>Blue amplitude</td><td>1.20 ± 0.1 time (burst ratio)</td><td>: "033A"</td></tr><tr><td>Yellow amplitude</td><td>0.85 ± 0.1 time (burst ratio)</td><td>: "033B"</td></tr><tr><td>Red phase</td><td>$104^\circ \pm 2^\circ$</td><td>: "0335"</td></tr><tr><td>Blue phase</td><td>$344^\circ \pm 2^\circ$</td><td>: "0333"</td></tr><tr><td>Yellow phase</td><td>$165^\circ \pm 2^\circ$</td><td>: "0334"</td></tr></table>	Adjustment address			Red amplitude	1.58 ± 0.1 time (burst ratio)	: "0338"	Blue amplitude	1.20 ± 0.1 time (burst ratio)	: "033A"	Yellow amplitude	0.85 ± 0.1 time (burst ratio)	: "033B"	Red phase	$104^\circ \pm 2^\circ$: "0335"	Blue phase	$344^\circ \pm 2^\circ$: "0333"	Yellow phase	$165^\circ \pm 2^\circ$: "0334"
Adjustment address																						
Red amplitude	1.58 ± 0.1 time (burst ratio)	: "0338"																				
Blue amplitude	1.20 ± 0.1 time (burst ratio)	: "033A"																				
Yellow amplitude	0.85 ± 0.1 time (burst ratio)	: "033B"																				
Red phase	$104^\circ \pm 2^\circ$: "0335"																				
Blue phase	$344^\circ \pm 2^\circ$: "0333"																				
Yellow phase	$165^\circ \pm 2^\circ$: "0334"																				

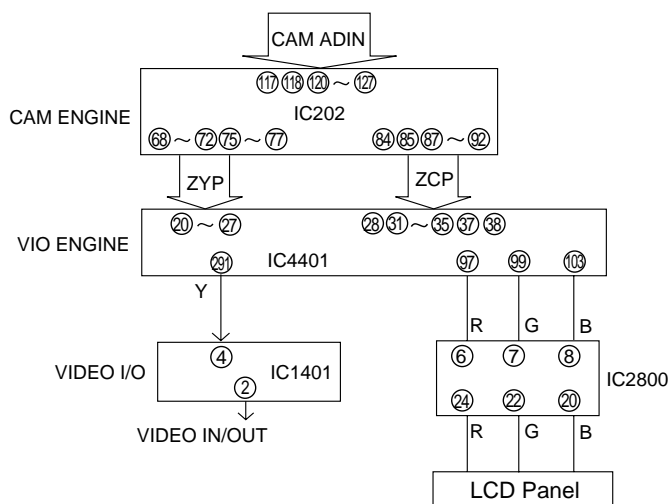
Item	Adjustment method														
(7) White balance adjustment(3200K) <ul style="list-style-type: none"> Measurement terminal: EE output Address: "0090" INDOOR_W/B R "0092" INDOOR_W/B R Measuring instrument: Vector scope Object: Grey scale Data variation width: "0000" to "03FF" 	(1) White balance adjustment is performed repeatedly. 														
(8) Color gain adjustment <ul style="list-style-type: none"> Measurement terminal: EE output Address: "0338" CGIN RYG "033A" CGIN BYG "033B" CGIN YLYG "0335" CMAT RYG "0333" CMAT BYG "0334" CMAT YLYG Measuring instrument: Vector scope Object: Waveform monitor color bar chart Data variation width: "0000" to "00FF" 	(1) Color gain adjustment is performed repeatedly.  <table> <tr> <td></td><td>Adjustment address</td></tr> <tr> <td>Red amplitude</td><td>1.58 ± 0.05 time (burst ratio) : "0338"</td></tr> <tr> <td>Blue amplitude</td><td>1.20 ± 0.05 time (burst ratio) : "033A"</td></tr> <tr> <td>Yellow amplitude</td><td>0.85 ± 0.1 time (burst ratio) : "033B"</td></tr> <tr> <td>Red phase</td><td>$104^\circ \pm 1^\circ$: "0335"</td></tr> <tr> <td>Blue phase</td><td>$344^\circ \pm 2^\circ$: "0333"</td></tr> <tr> <td>Yellow phase</td><td>$165^\circ \pm 2^\circ$: "0334"</td></tr> </table>		Adjustment address	Red amplitude	1.58 ± 0.05 time (burst ratio) : "0338"	Blue amplitude	1.20 ± 0.05 time (burst ratio) : "033A"	Yellow amplitude	0.85 ± 0.1 time (burst ratio) : "033B"	Red phase	$104^\circ \pm 1^\circ$: "0335"	Blue phase	$344^\circ \pm 2^\circ$: "0333"	Yellow phase	$165^\circ \pm 2^\circ$: "0334"
	Adjustment address														
Red amplitude	1.58 ± 0.05 time (burst ratio) : "0338"														
Blue amplitude	1.20 ± 0.05 time (burst ratio) : "033A"														
Yellow amplitude	0.85 ± 0.1 time (burst ratio) : "033B"														
Red phase	$104^\circ \pm 1^\circ$: "0335"														
Blue phase	$344^\circ \pm 2^\circ$: "0333"														
Yellow phase	$165^\circ \pm 2^\circ$: "0334"														
(9) White balance adjustment (3200K + LB165) <ul style="list-style-type: none"> Measurement terminal: EE output Address: "0016" OUTDOOR R "0018" OUTDOOR B Measuring instrument: Vector scope Object: Grey scale Data variation width: "0000" to "03FF" 	(1) The color temperature conversion filter (LB165) is mounted in front of lens. (2) Indication of vector scope is observed in the grey scale standard record state, and an adjustment is made so that the luminous dots are located in the following positions: <div style="border: 1px solid black; padding: 5px; display: inline-block;"> R-Y $0 \pm 5\%$ (burst ratio) B-Y $0 \pm 5\%$ (burst ratio) </div> 														
(10) Iris AE adjustment <ul style="list-style-type: none"> Measurement terminal: S terminal luminance signal output (75 Ω termination) Address: "0002" AE_CVT Measuring instrument: Oscilloscope (horizontal sync) Object: Grey scale Data variation width: "0000" to "00FE" 	(1) Set the unit to the normal operation mode (write the data "00FF" to the address "0000"). (2) Video output is observed with the oscilloscope in the grey scale standard record state, the data of address "0002" is rewritten, and the luminance signal level is adjusted white to 680 ± 10 mVp-p.  <p style="text-align: right;">10IRE/div (71.4mV/div)</p>														

11. USEFUL TIPS (PROBLEMS DIFFER FROM THOSE FOUND ON VHS OR 8MM DECKS BECAUSE THE SIGNALS ARE DIGITALLY PROCESSED.)

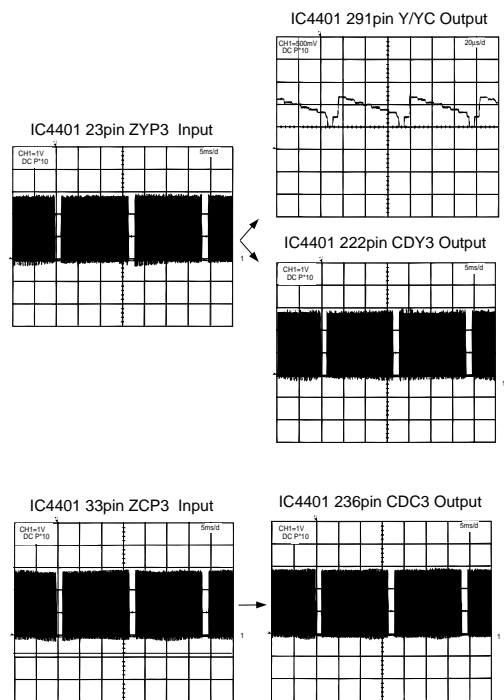
<p>Camera (EE mode)</p>  <p>Major circuits to be checked</p> <ul style="list-style-type: none"> • CCD • Camera circuits (CDS, ADC, CAM ENGINE) • MECHA/SYSTEM MiCON (IC701) • VIDEO I/O (IC1401) • VIO ENGINE (IC4401) 	<p>VCR (EE mode)</p>  <p>Major circuits to be checked</p> <ul style="list-style-type: none"> • MECHA/SYSTEM MiCON (IC701) • CAM ENGINE (IC202) • REC/PB ENGINE (IC452) 	<p>Camera (REC mode) VCR (PB mode)</p>  <p>Major circuits to be checked</p> <ul style="list-style-type: none"> • CAM ENGINE (IC202) • REC/PB ENGINE (IC452)
<p>Camera (REC mode) VCR (PB mode)</p>  <p>Major circuits to be checked</p> <ul style="list-style-type: none"> • EQ/PLL (IC3401) • Head amplifier (IC301) * Dirty or defective video head 	<p>Camera (REC mode) VCR (PB mode)</p> <div style="display: flex; align-items: center;">  or  </div> <p>Major circuits to be checked</p> <ul style="list-style-type: none"> • EQ/PLL (IC3401) • Head amplifier (IC301) * Dirty or defective video head 	
<p>VCR (PB mode) + color bar</p>  <p>Major circuits to be checked</p> <ul style="list-style-type: none"> • CAM ENGINE (IC202) 	<p>VCR (PB mode) + color bar</p>  <p>Major circuits to be checked</p> <ul style="list-style-type: none"> • Adjustment of the electromagnetic conversion circuit system. 	<p>Camera (EE mode)</p>  <p>Major circuits to be checked</p> <ul style="list-style-type: none"> • Y data between CAM ENGINE (IC202) and VIO ENGINE (IC4401) is missing.

12. SIGNAL FLOW DIAGRAMS

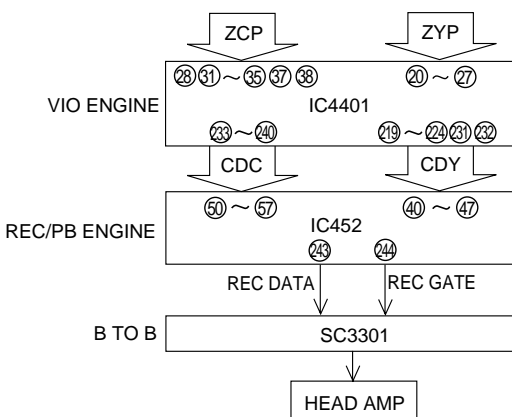
12-1. EE MODE FLOW (VIDEO)



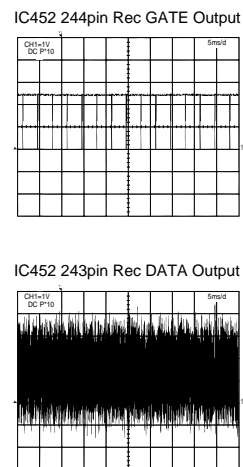
WAVEFORM DIAGRAM (DURING COLOR BAR RECORDING)



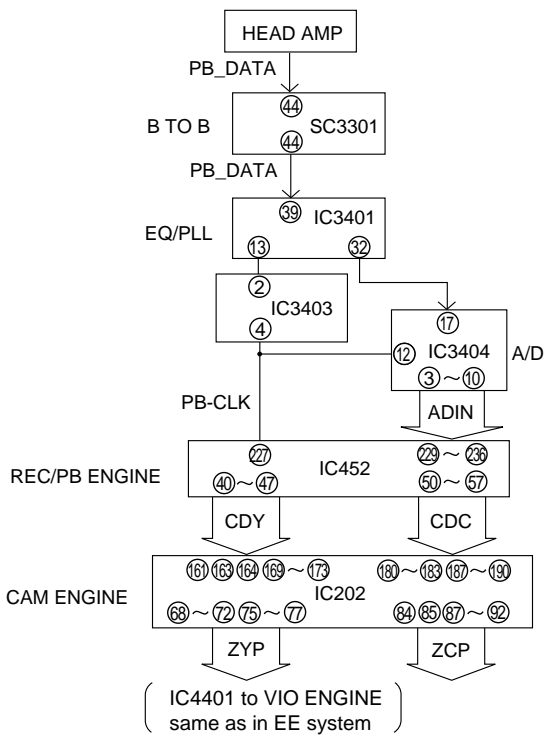
12-2. FLOW IN REC MODE (VIDEO)



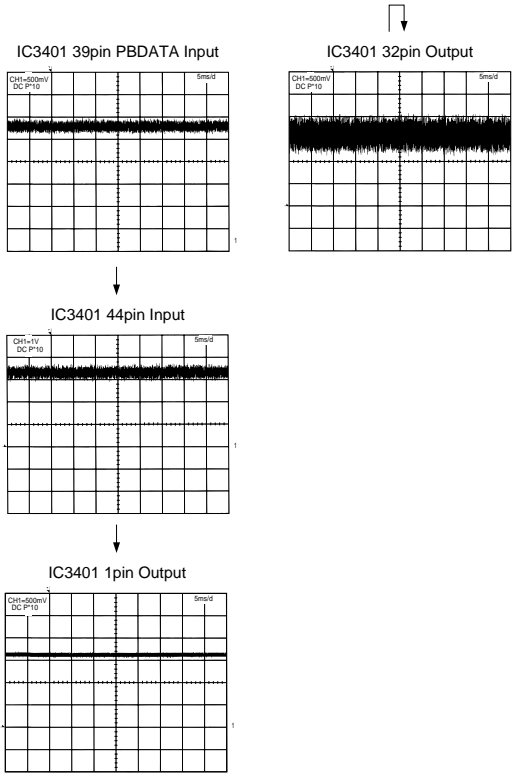
WAVEFORM DIAGRAM (DURING COLOR BAR RECORDING)



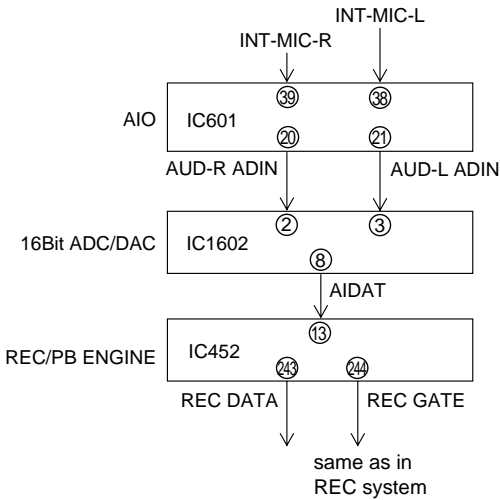
12-3. FLOW IN PB MODE (VIDEO)



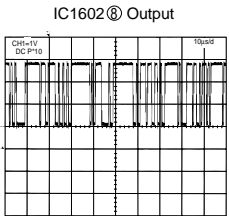
WAVEFORM DIAGRAM
(DURING COLOR BAR PLAYBACK)



12-4. FLOW IN REC MODE (AUDIO)

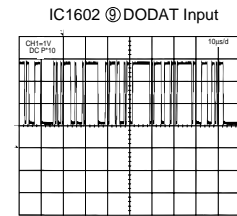
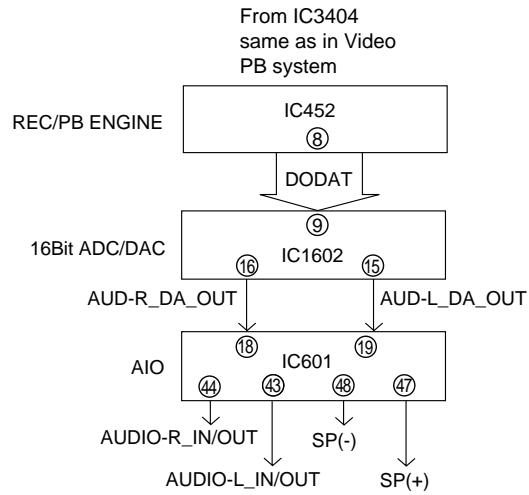


WAVEFORM DIAGRAM (1.6 kHz SINE WAVE)



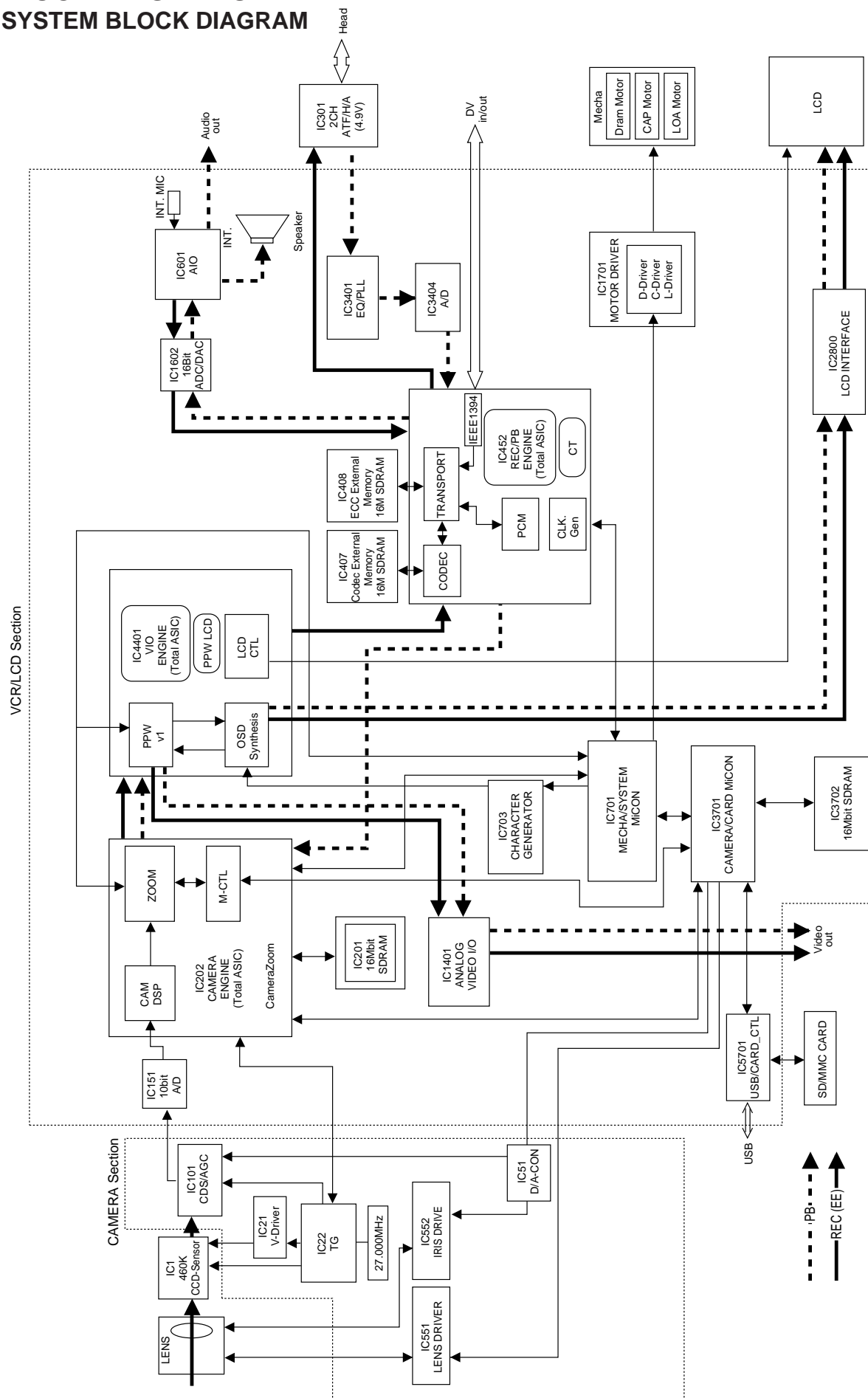
12-5. FLOW IN PB MODE (AUDIO)

WAVEFORM DIAGRAM (1.6 kHz SINE WAVE)

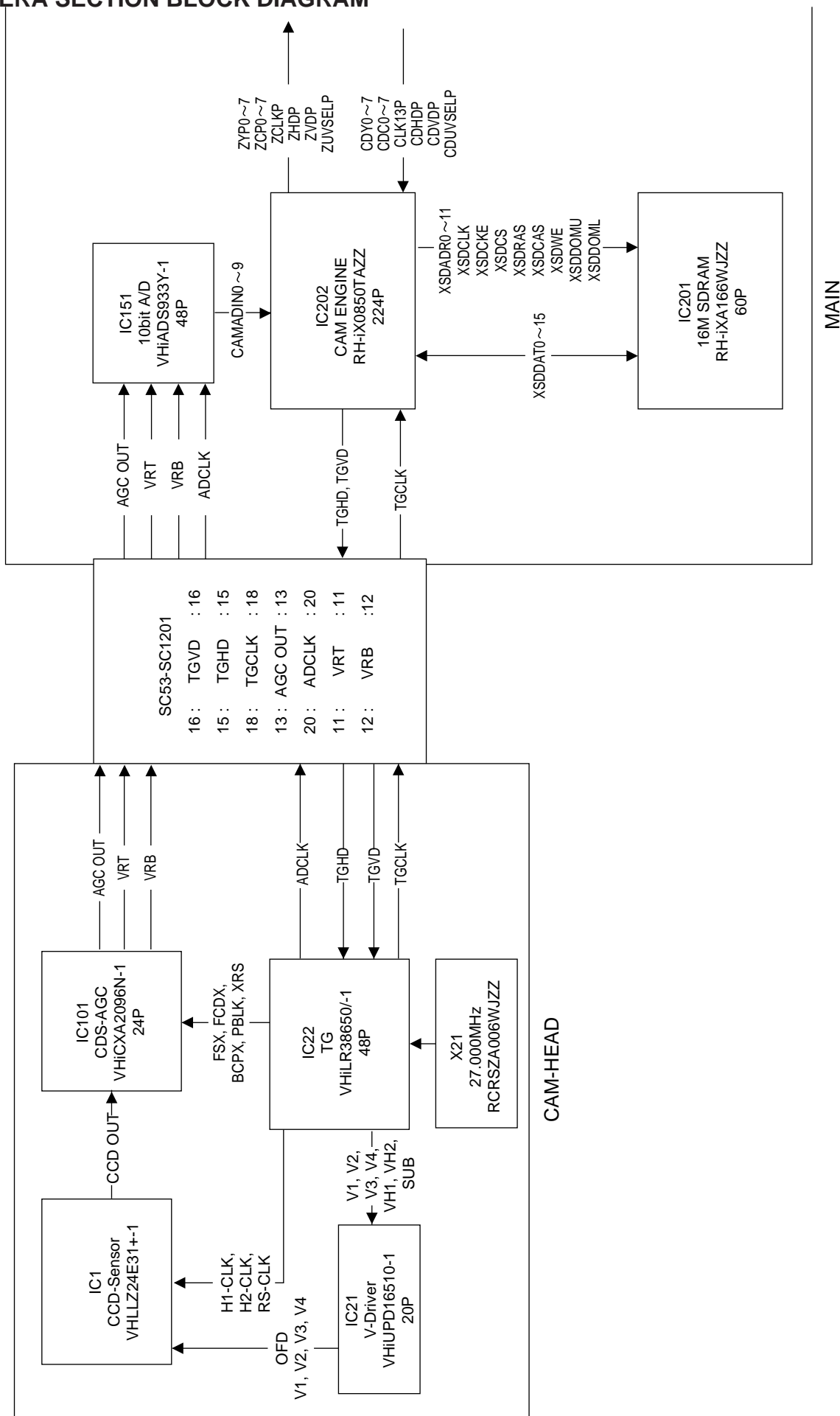


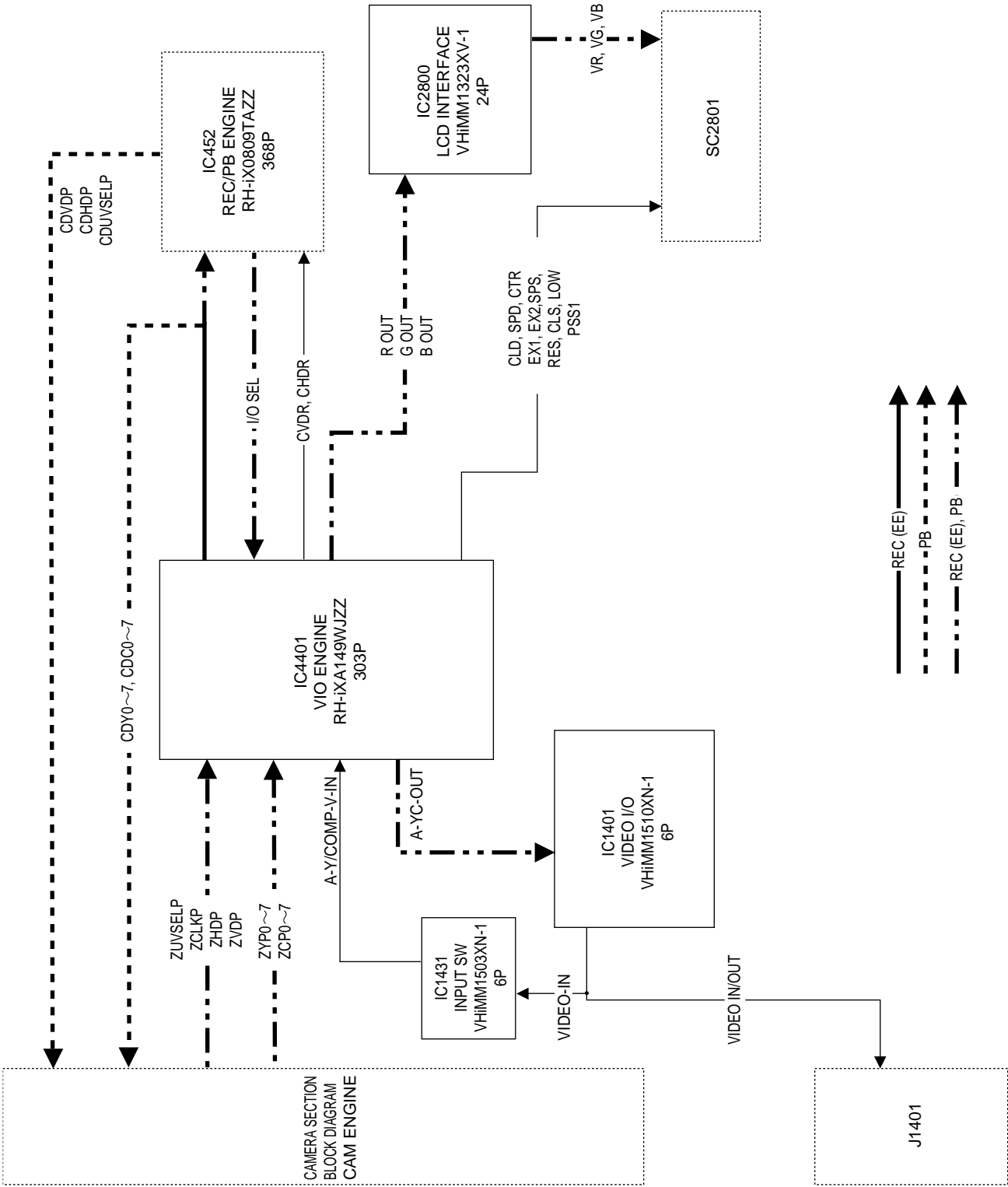
13. BLOCK DIAGRAMS

13-1. SYSTEM BLOCK DIAGRAM

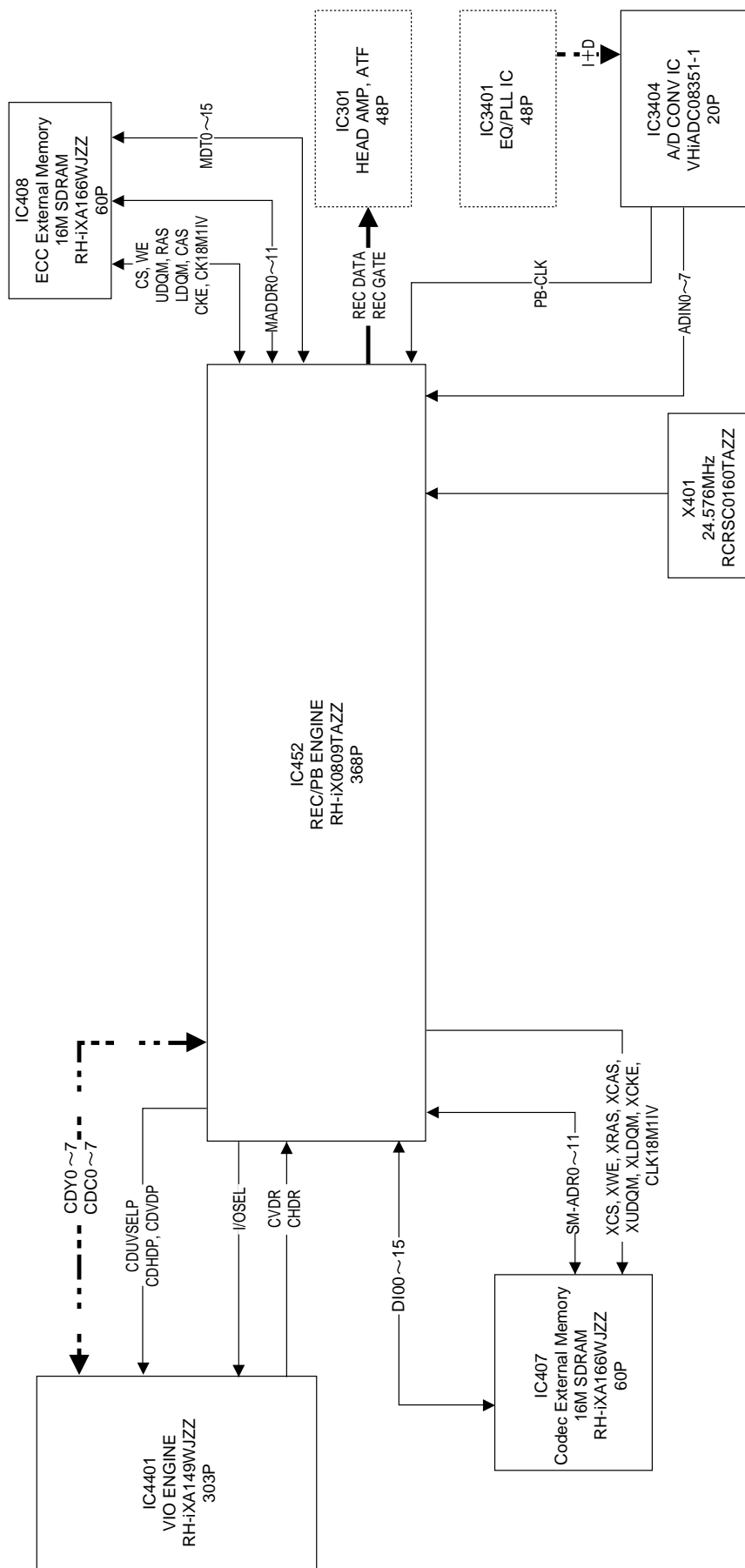


13-2. CAMERA SECTION BLOCK DIAGRAM

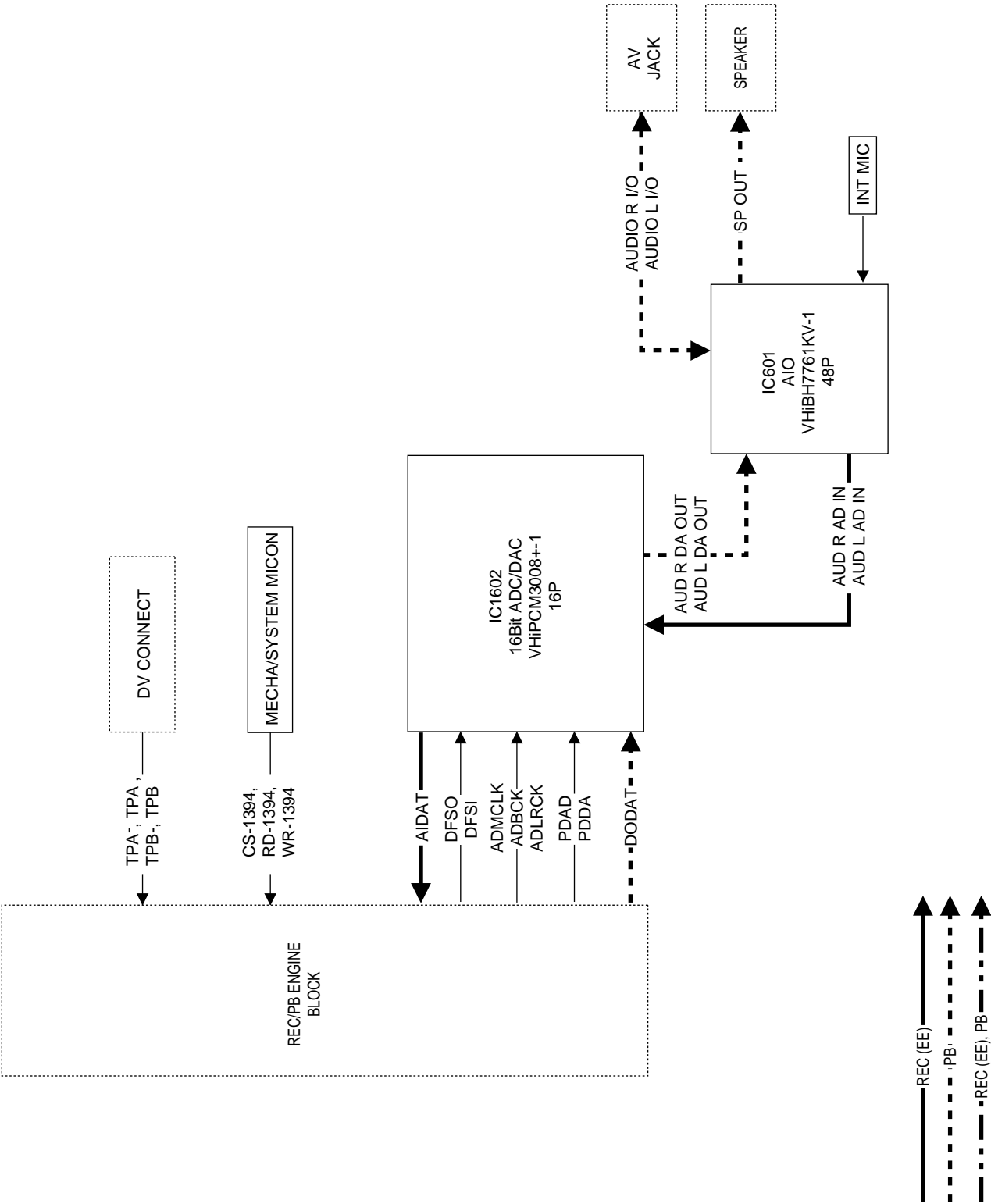




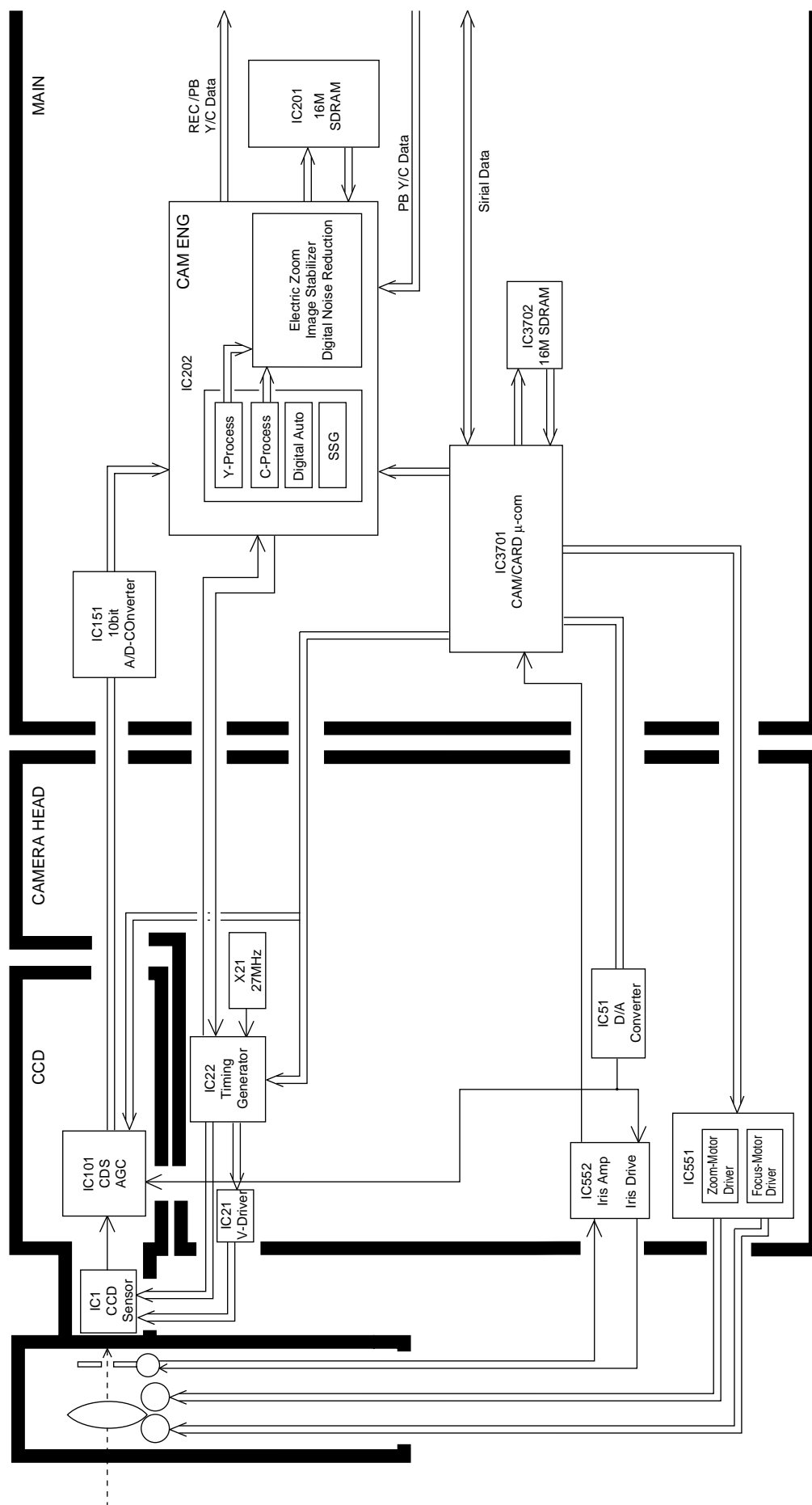
13-4. REC/PB SECTION BLOCK DIAGRAM



13-5. AUDIO/DIGITAL OUTPUT SECTION BLOCK DIAGRAM

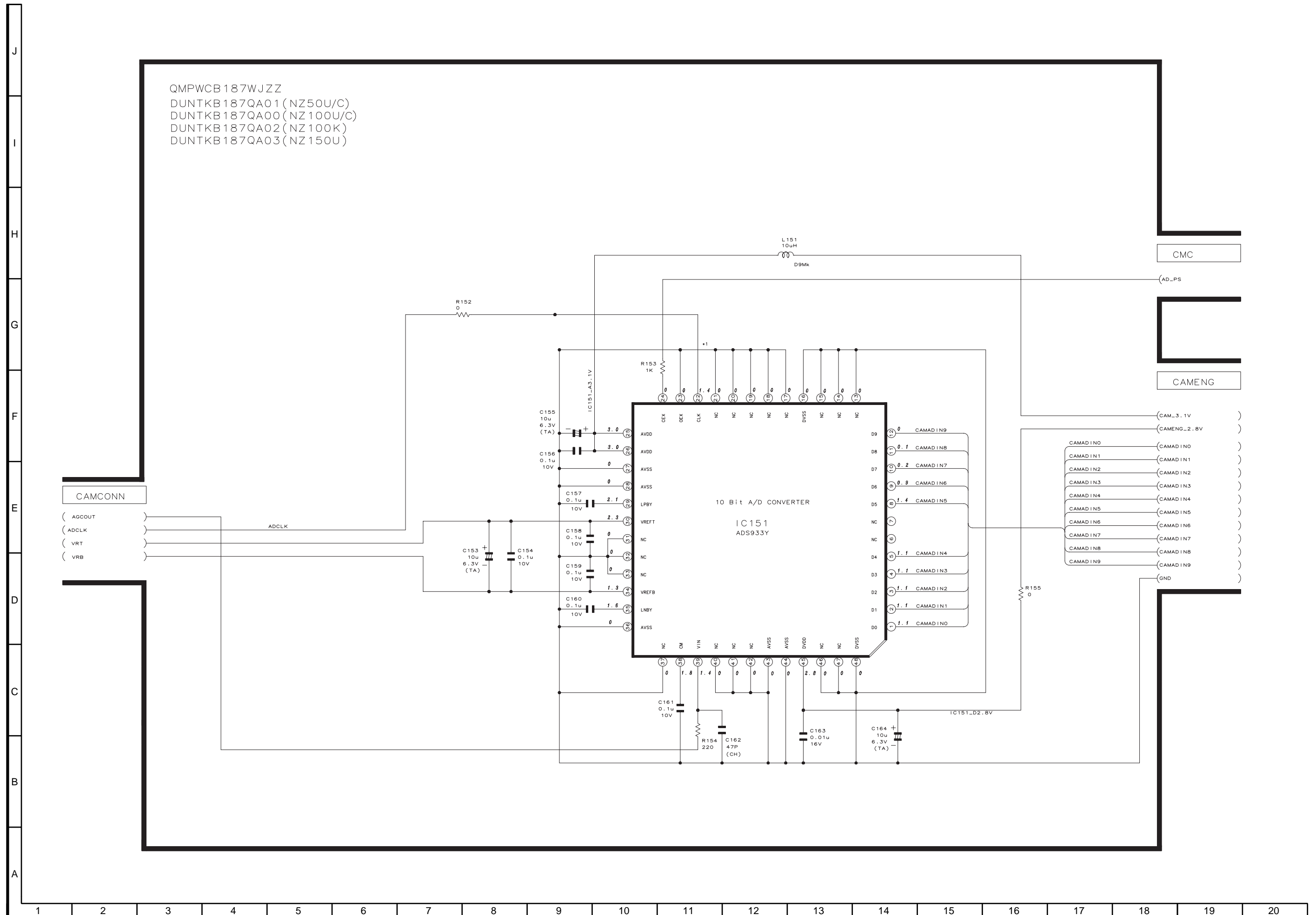


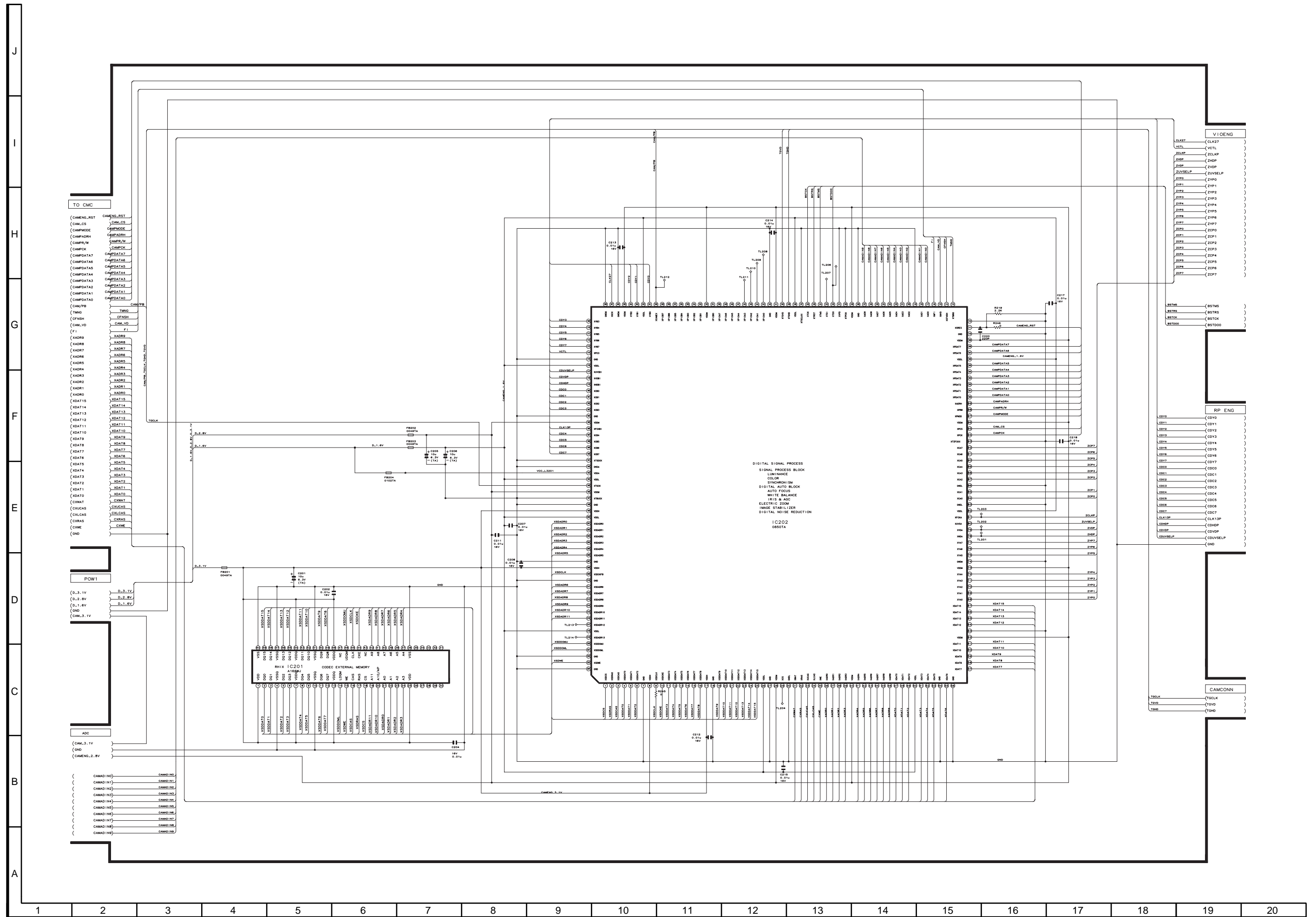
13-6. CAMERA CIRCUIT BLOCK DIAGRAM

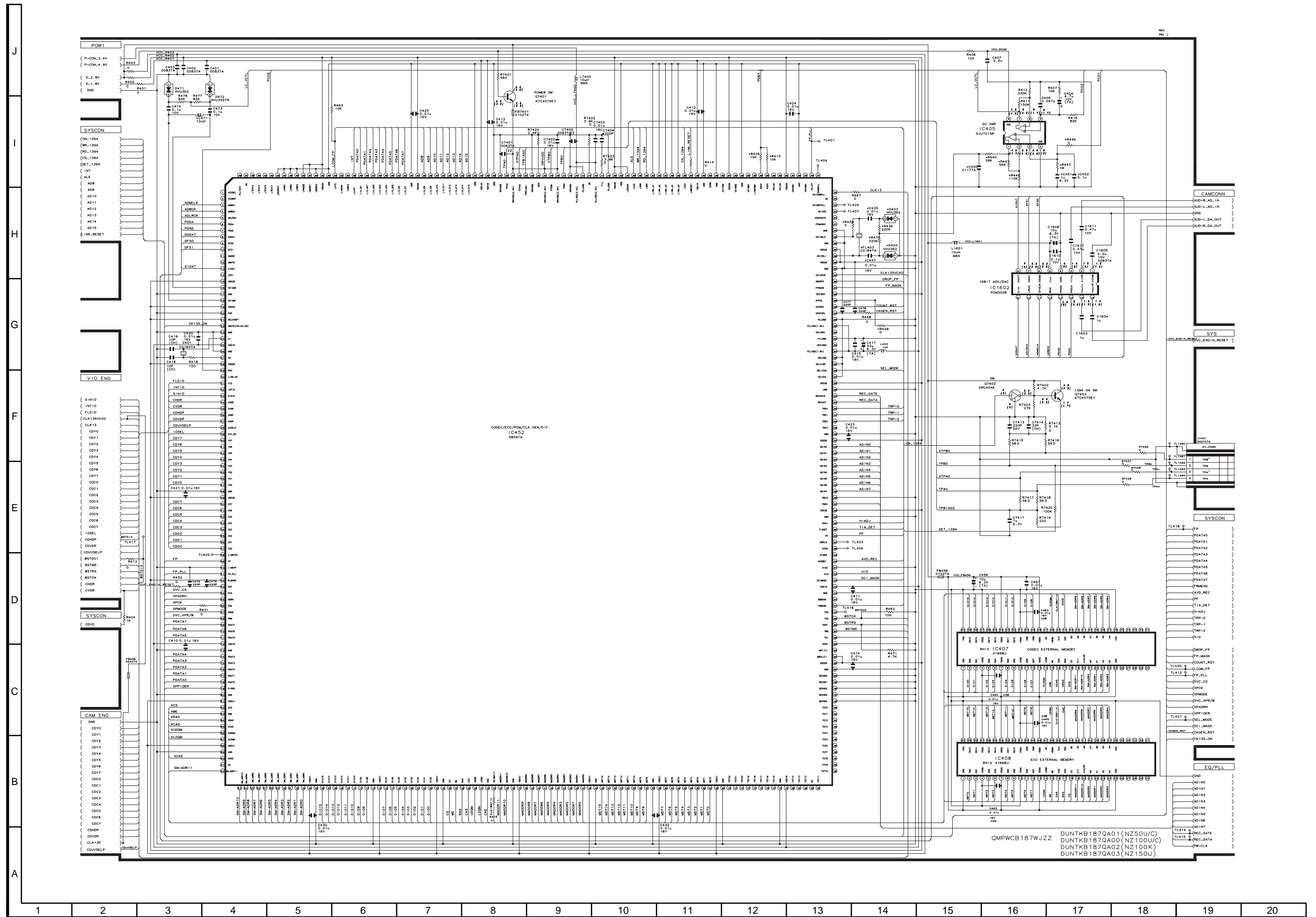




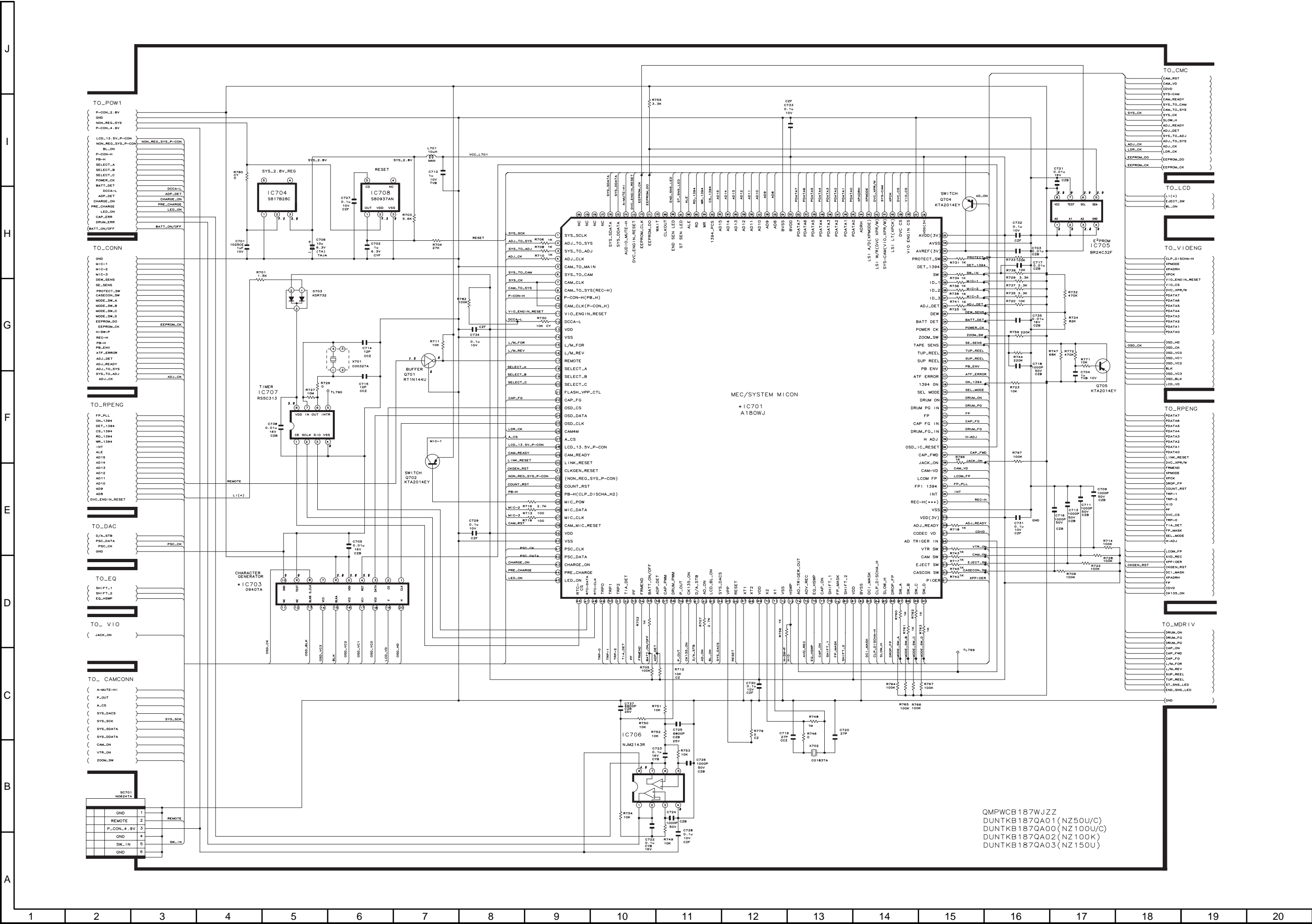
14-2. ADC SCHEMATIC DIAGRAM



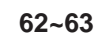




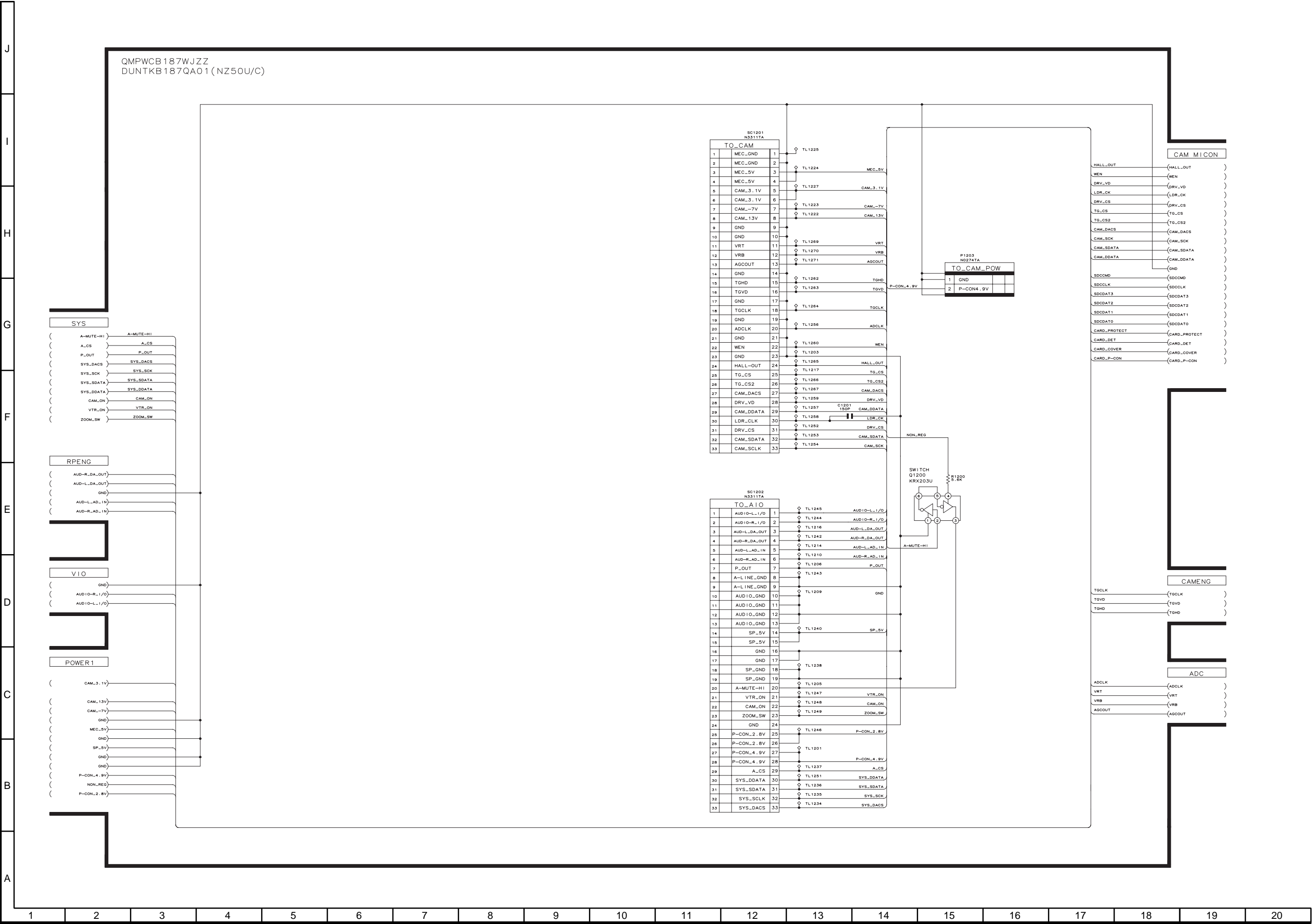
14-5. MEC/SYS MiCON SCHEMATIC DIAGRAM



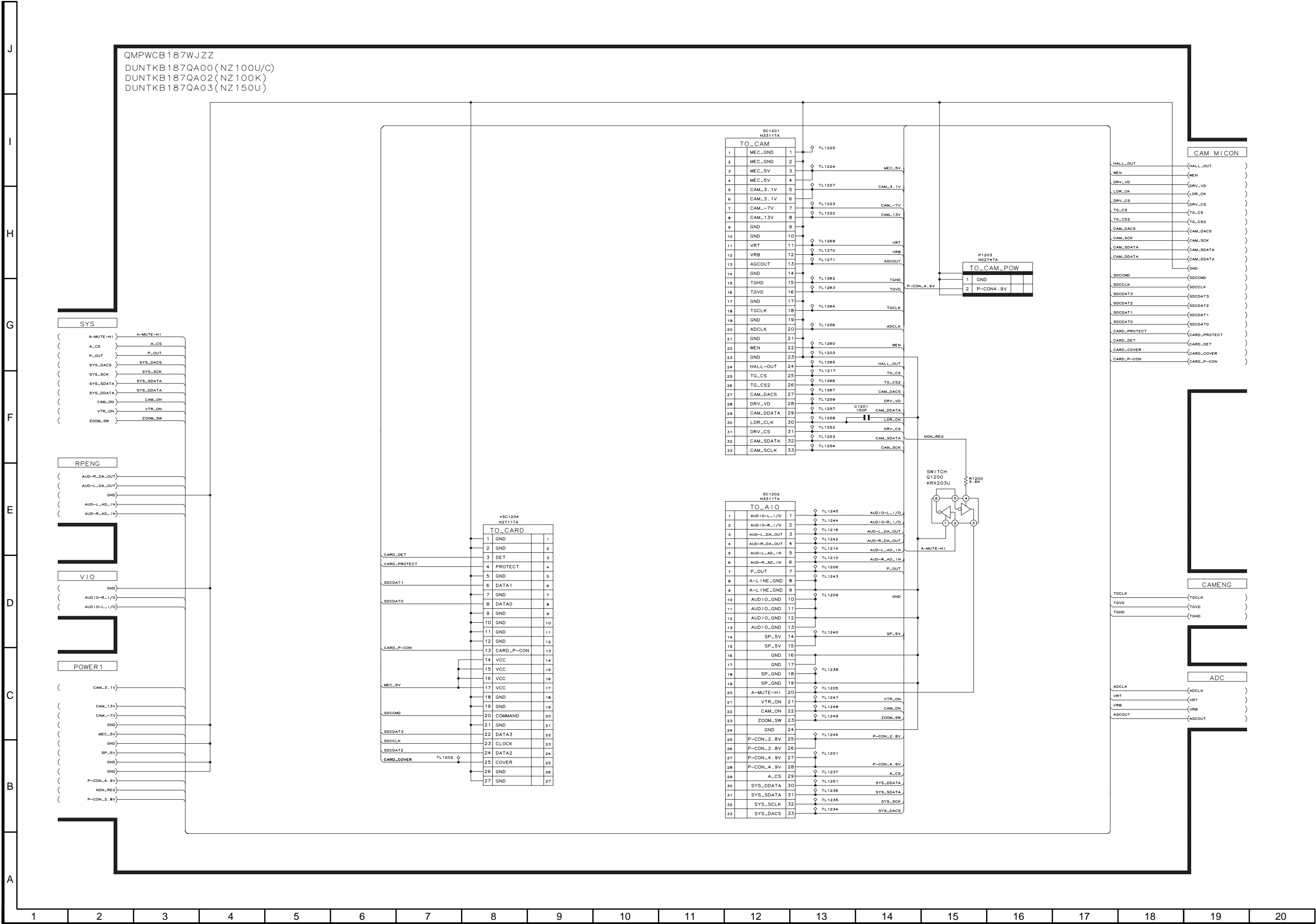
QMPWCB187WJZZ
DUNTKB187QA01(NZ50U/C)
DUNTKB187QA00(NZ100U/C)
DUNTKB187QA02(NZ100K)
DUNTKB187QA03(NZ150U)



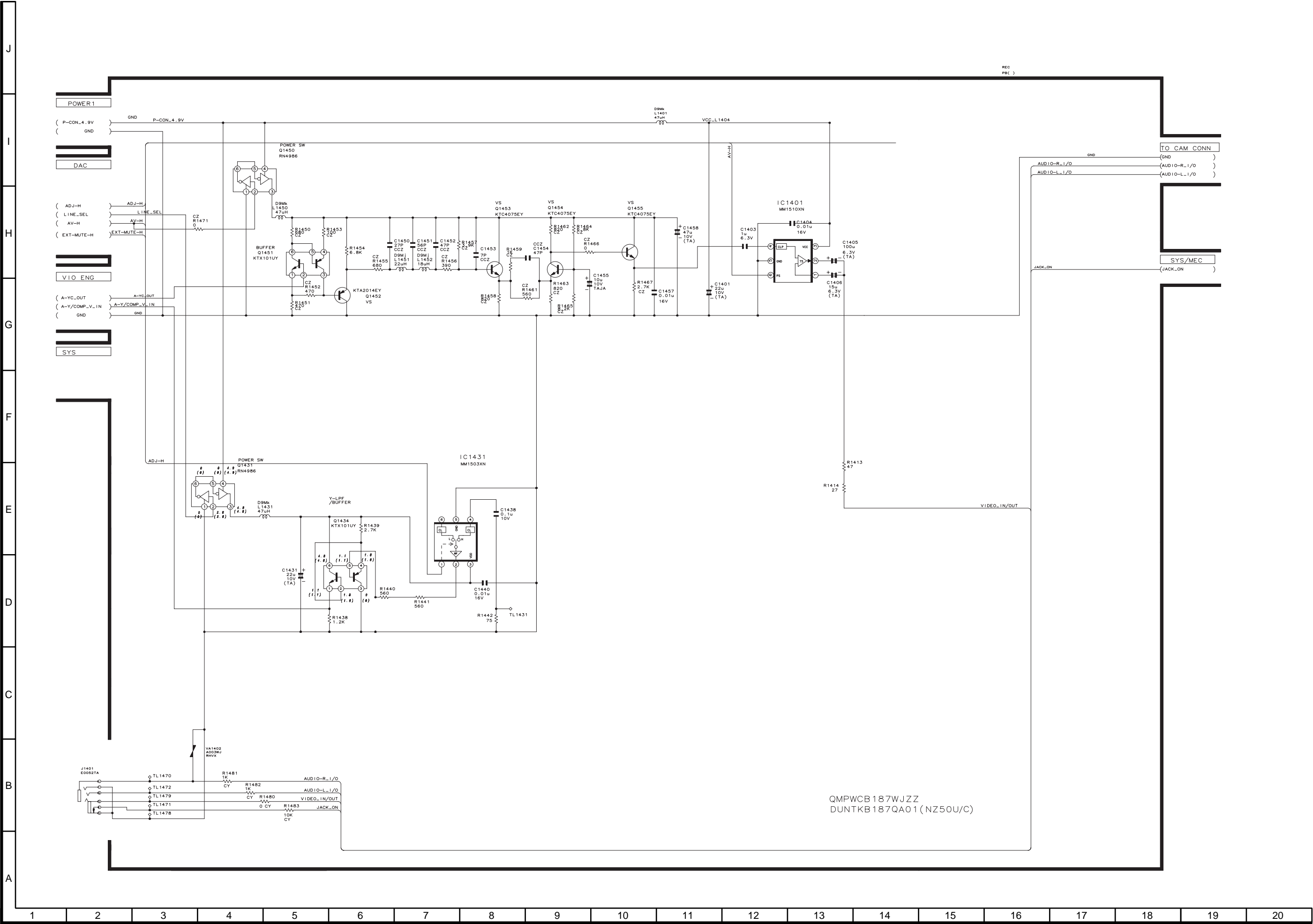
14-7. CAMERA CONN SCHEMATIC DIAGRAM (VL-NZ50U)



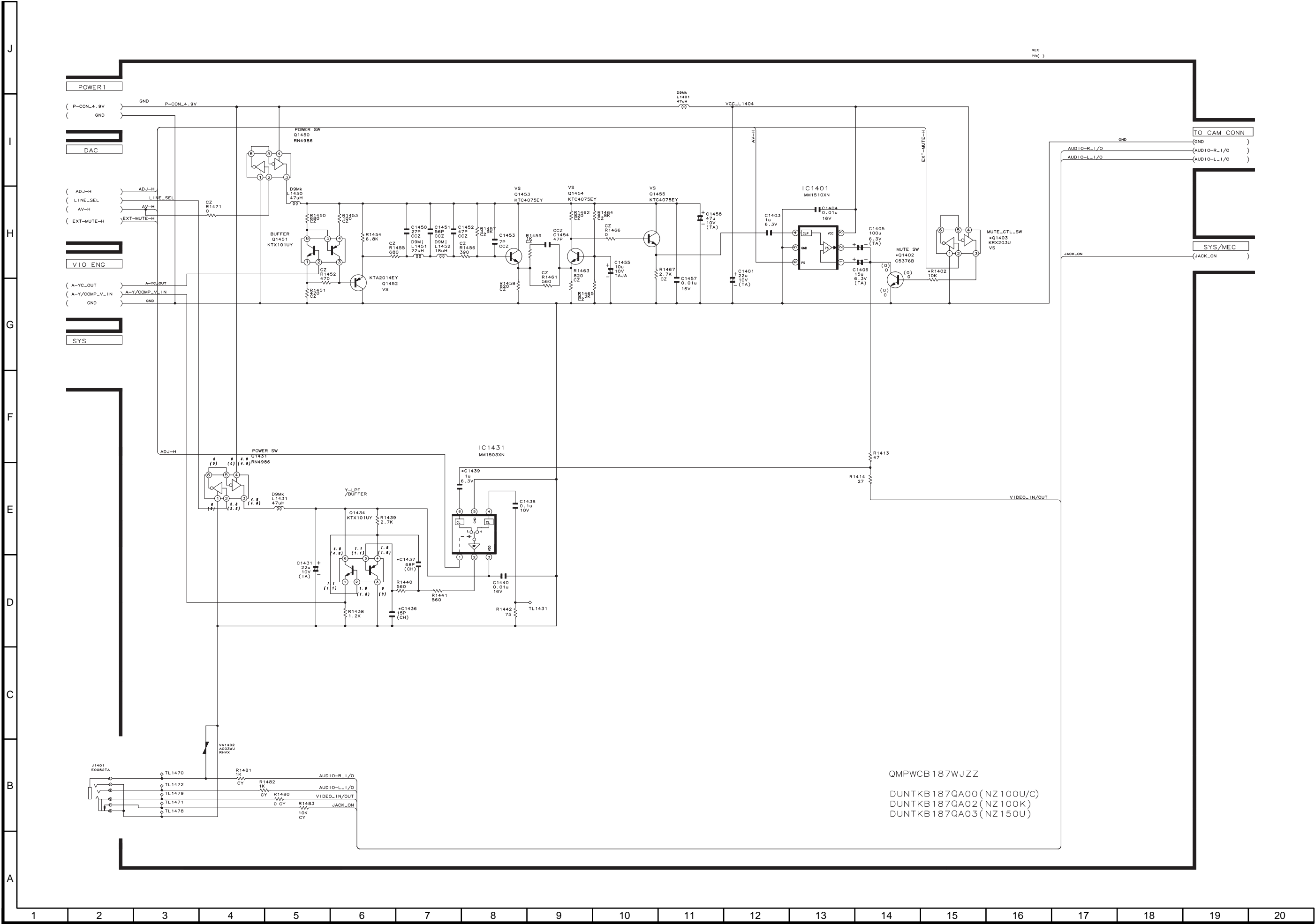
14-8. CAMERA CONN SCHEMATIC DIAGRAM (VL-NZ100U/NZ150U)

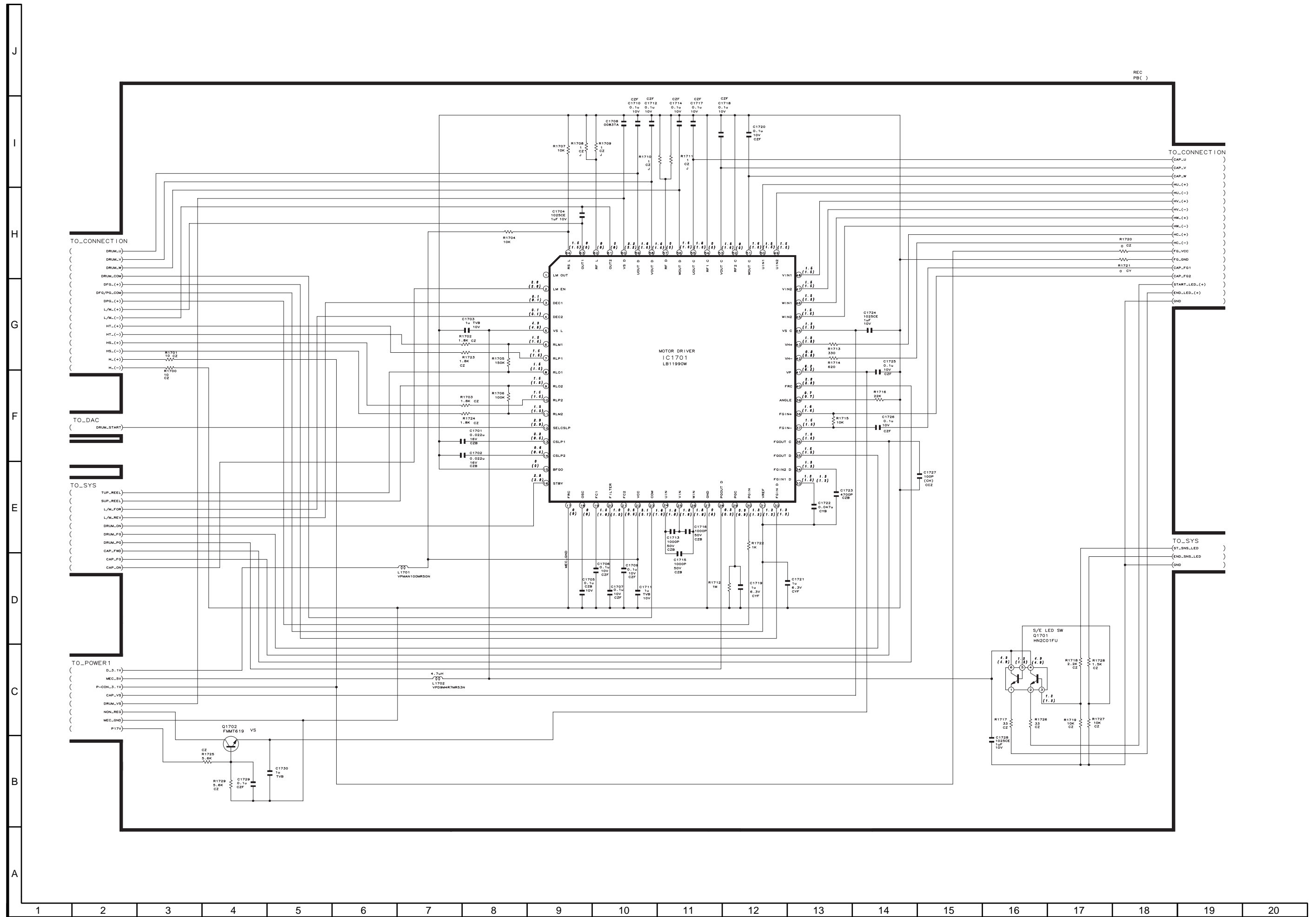


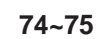
14-9. VIDEO I/O SCHEMATIC DIAGRAM (VL-NZ50U)



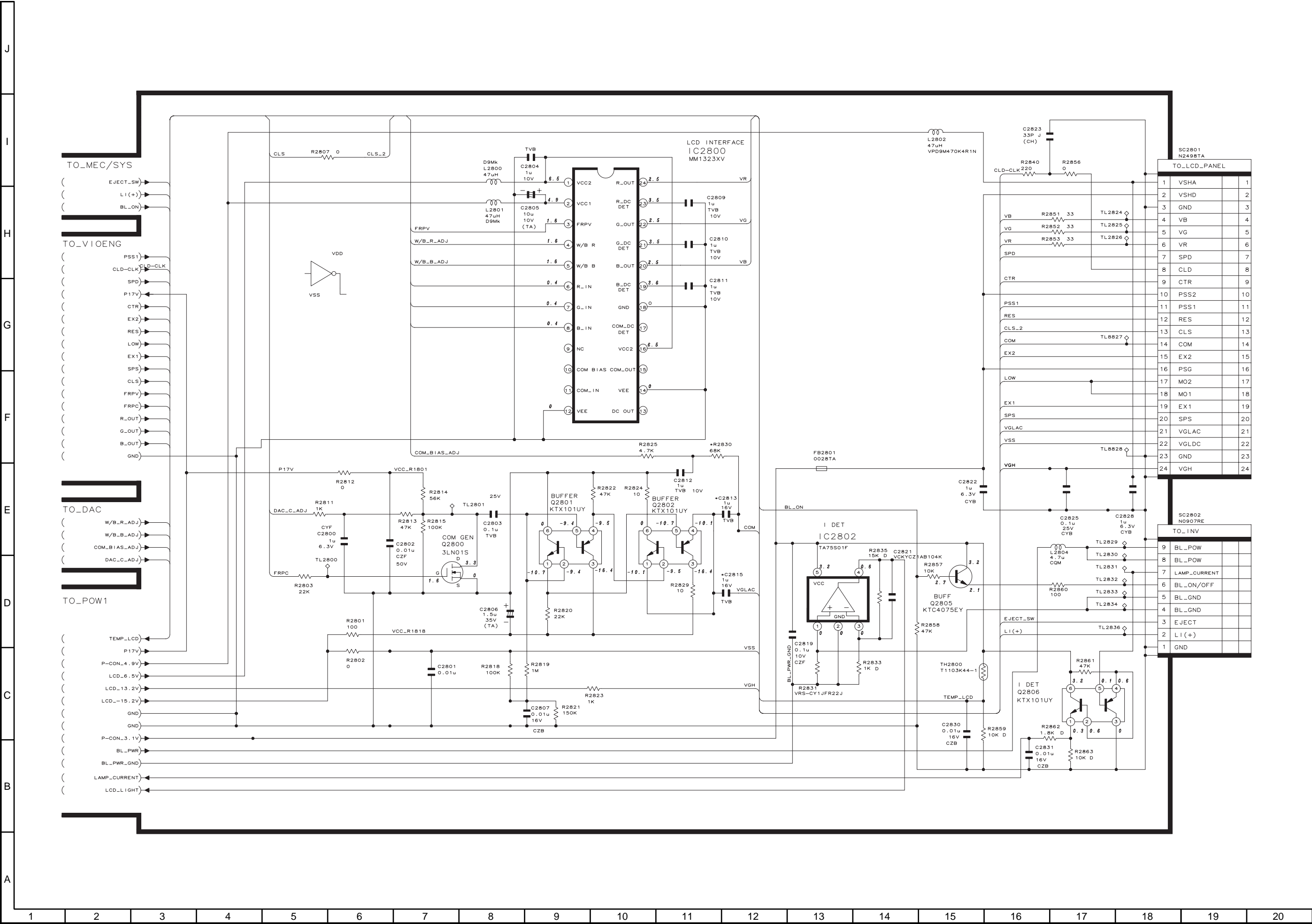
14-10. VIDEO I/O SCHEMATIC DIAGRAM (VL-NZ100U/NZ150U)



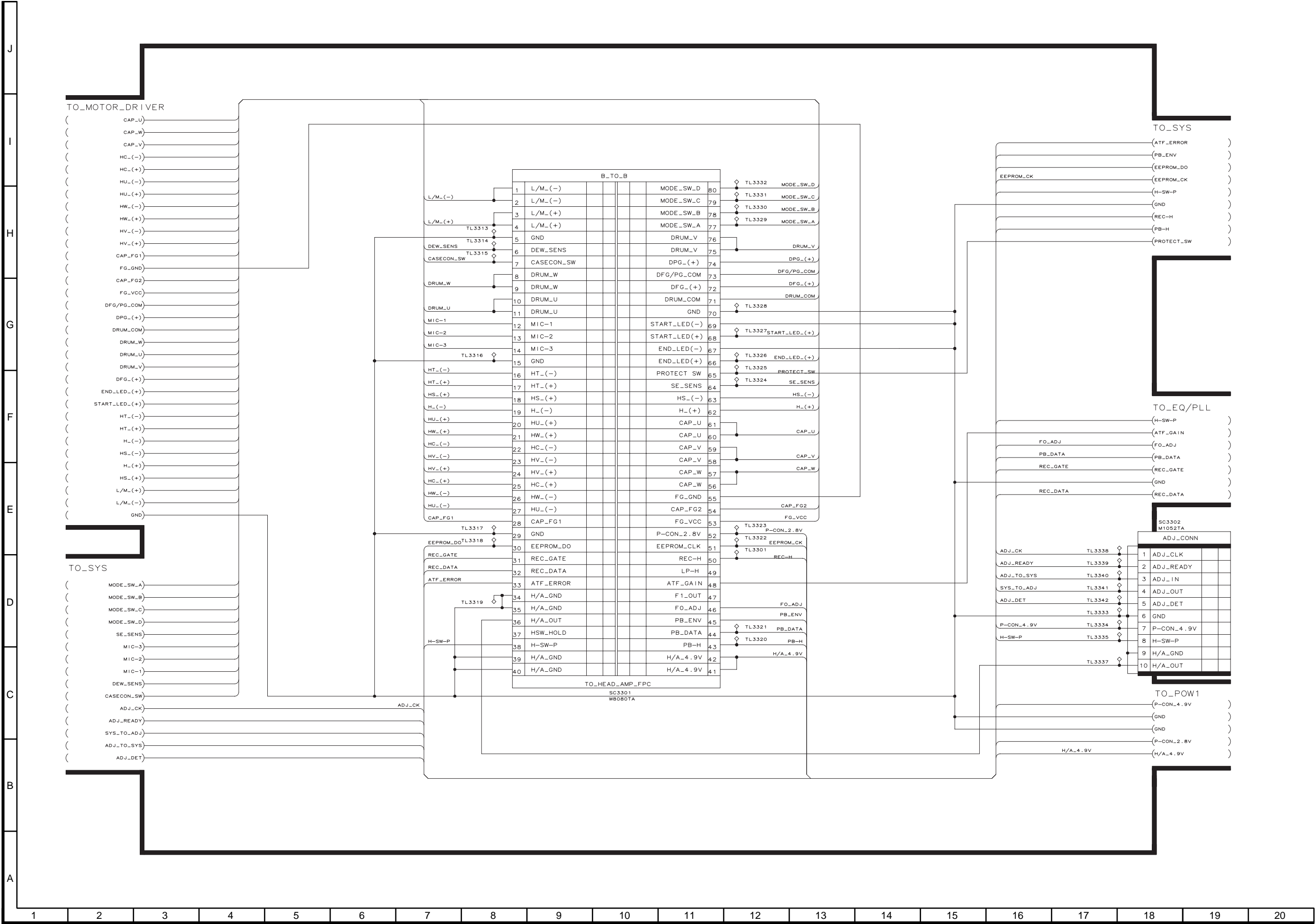




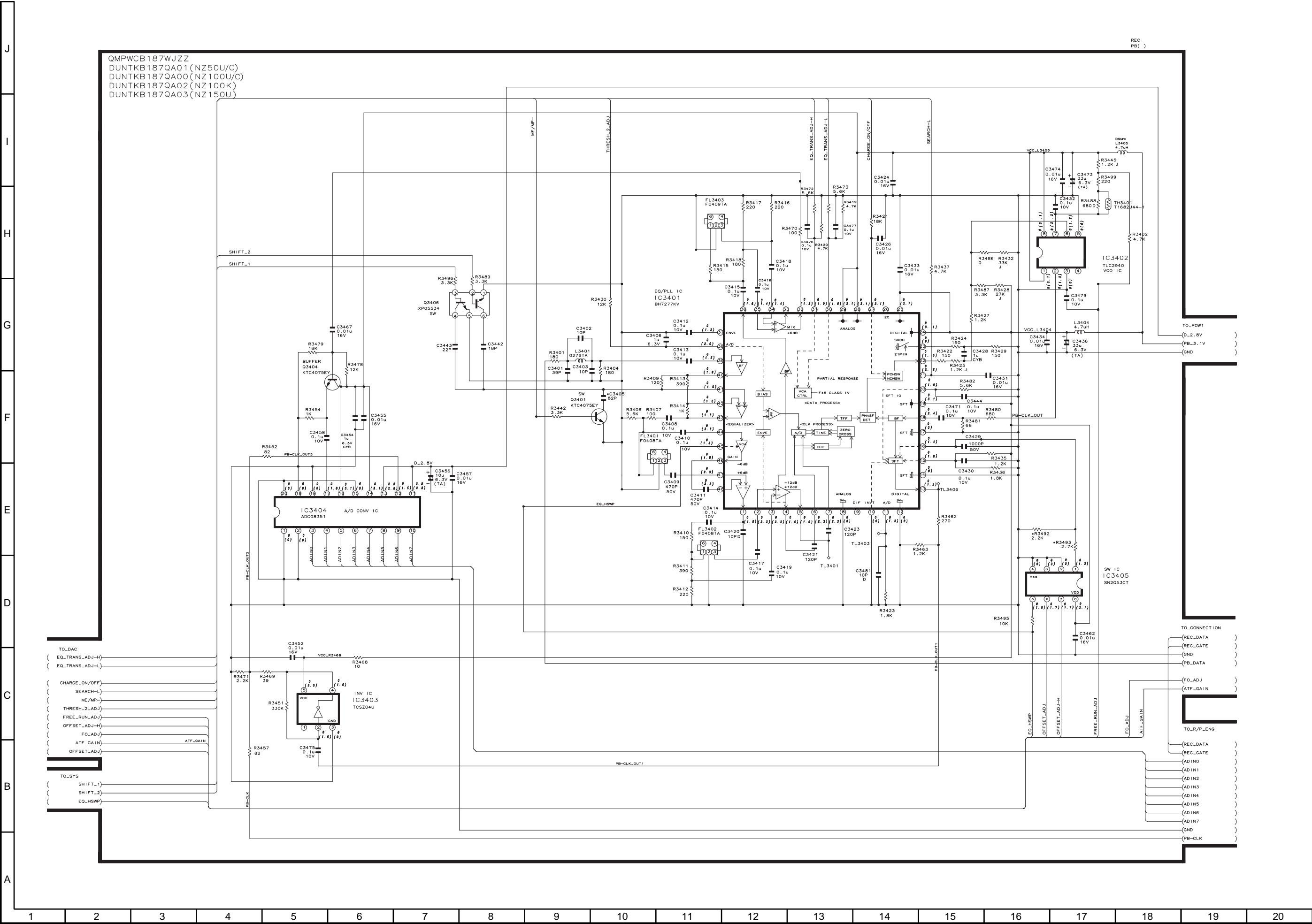
14-13. LCD SCHEMATIC DIAGRAM



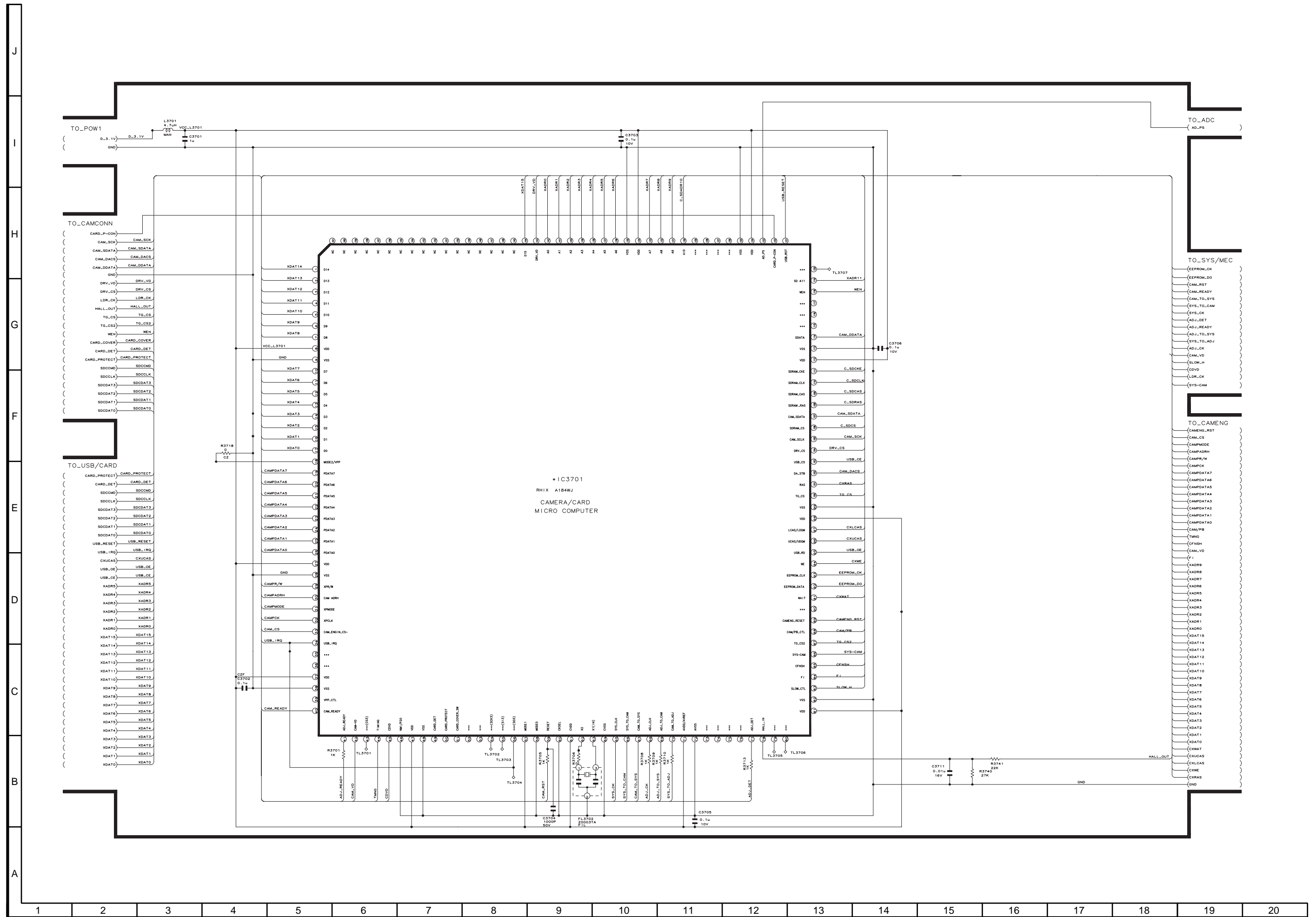
14-14. CONNECTION(B-B) SCHEMATIC DIAGRAM



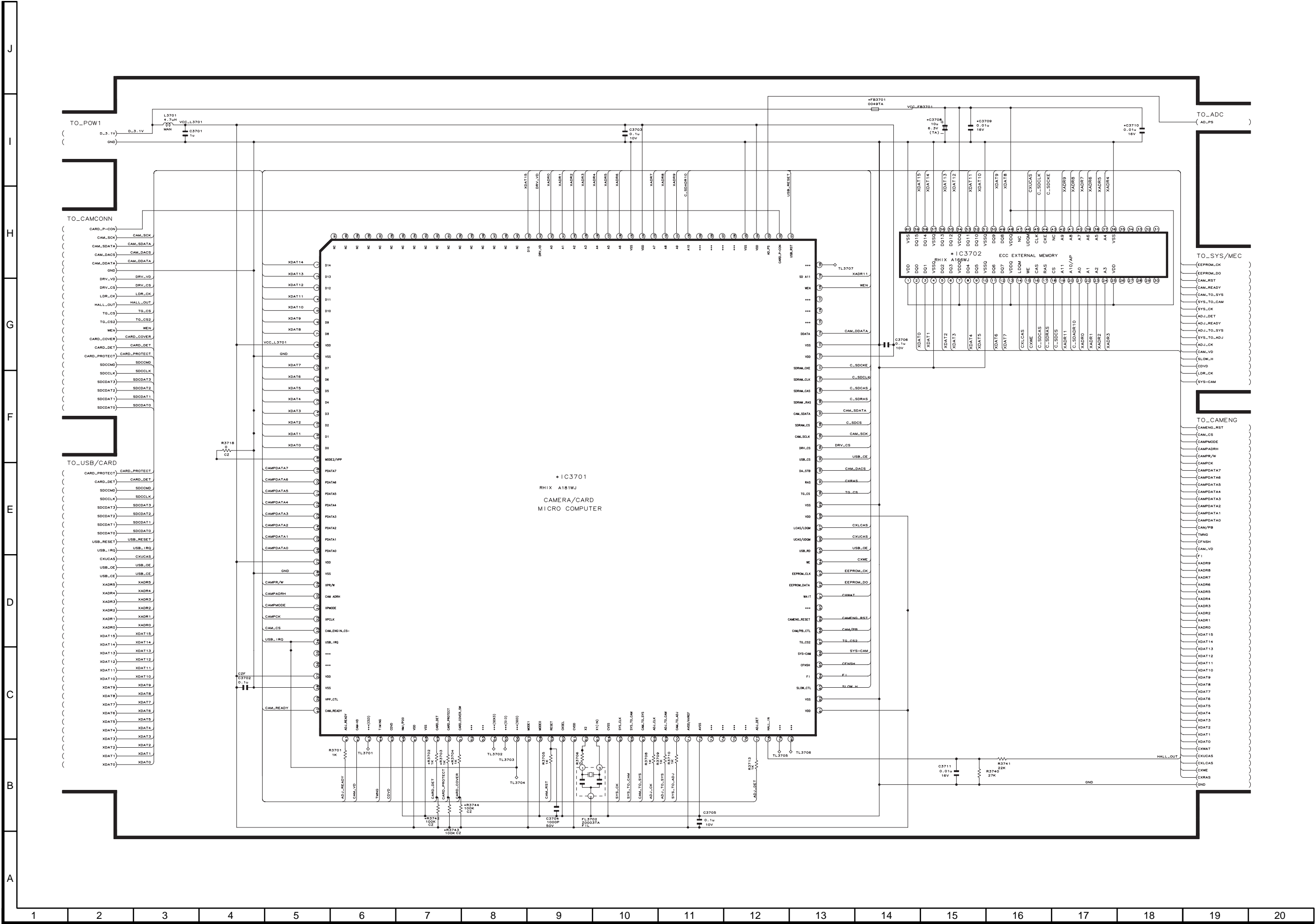
14-15. EQ/PLL SCHEMATIC DIAGRAM



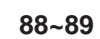
14-16. CAM/CARD MiCON SCHEMATIC DIAGRAM (VL-NZ50U)



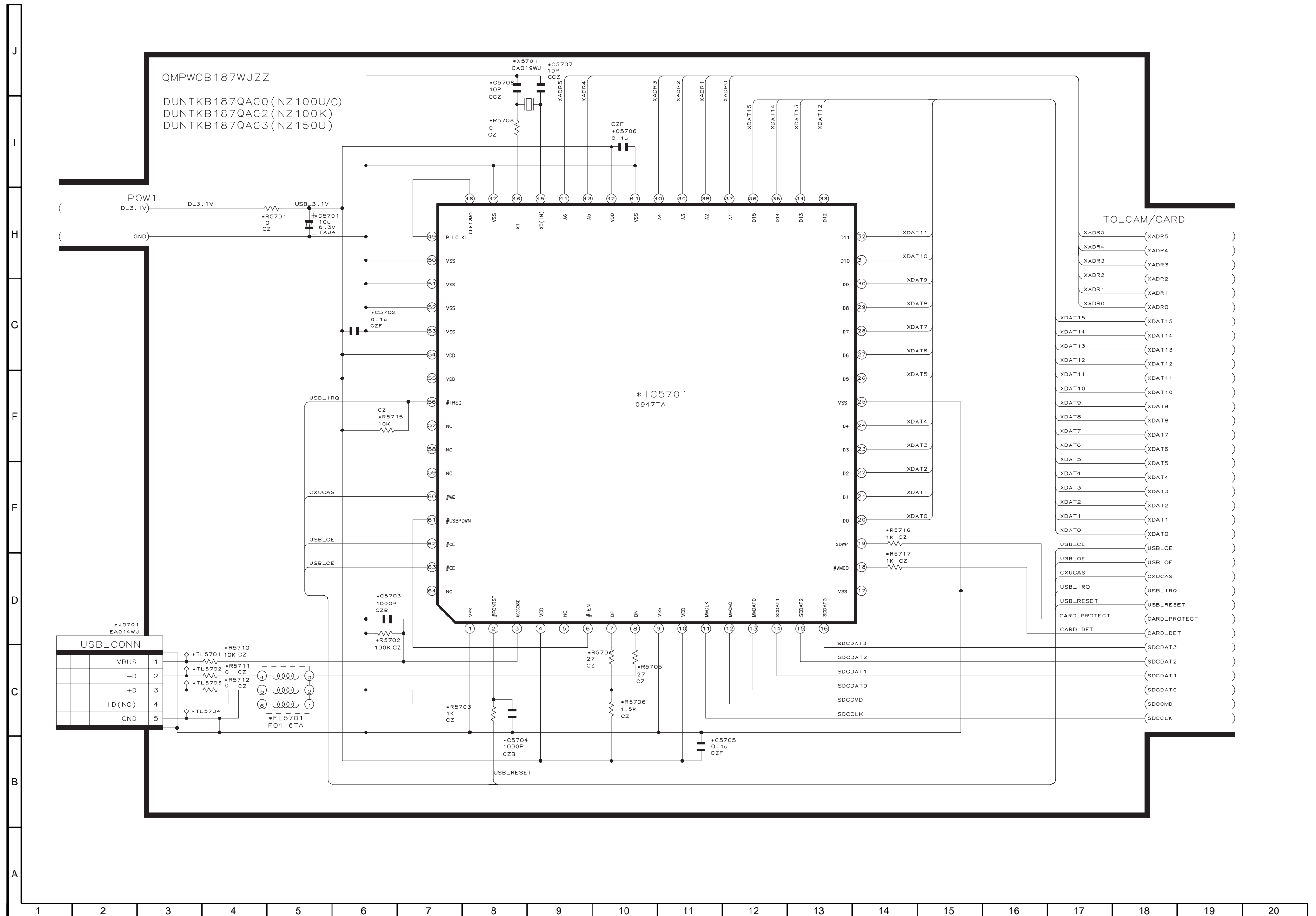
14-17. CAM/CARD MiCON SCHEMATIC DIAGRAM (VL-NZ100U/NZ150U)



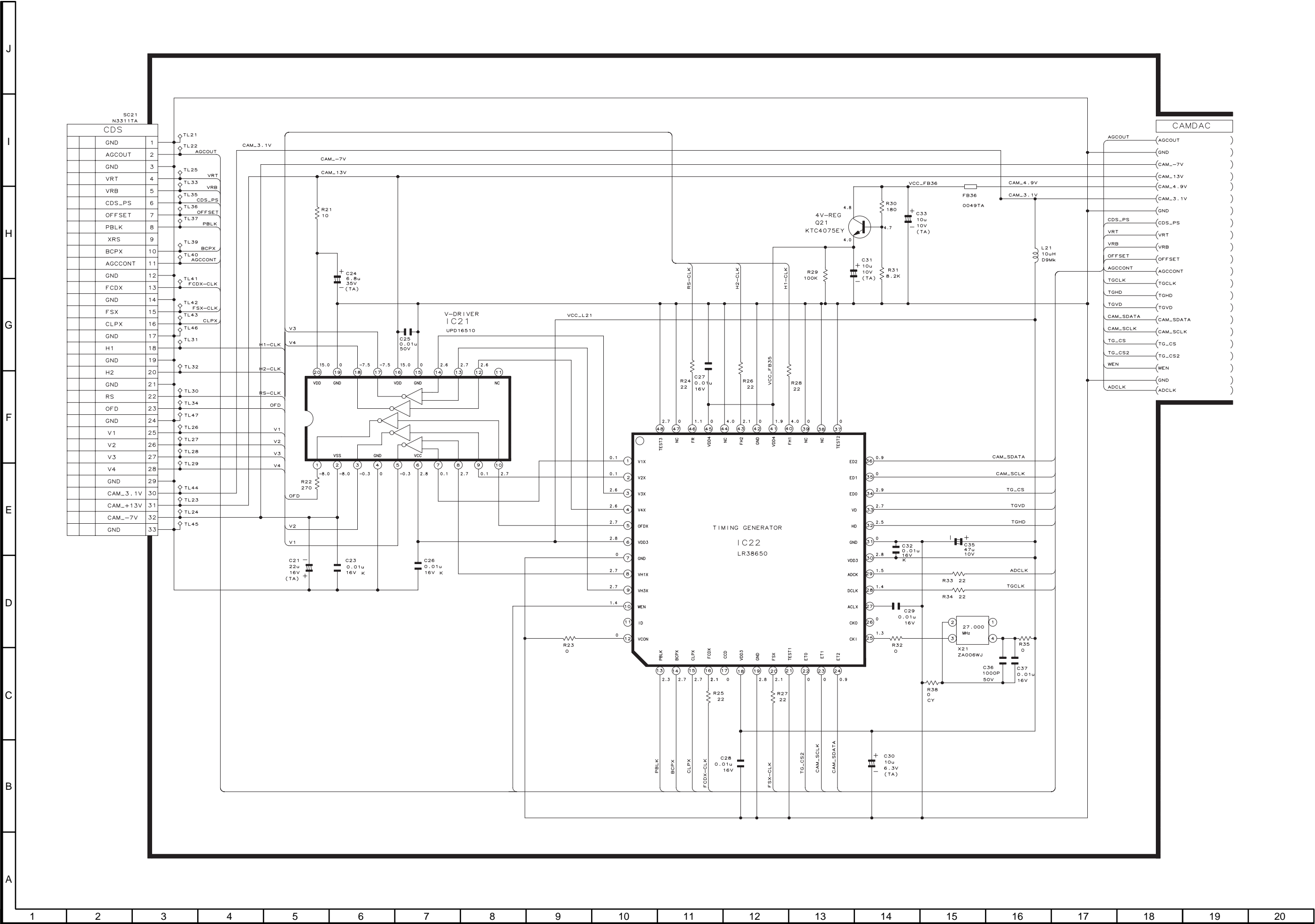




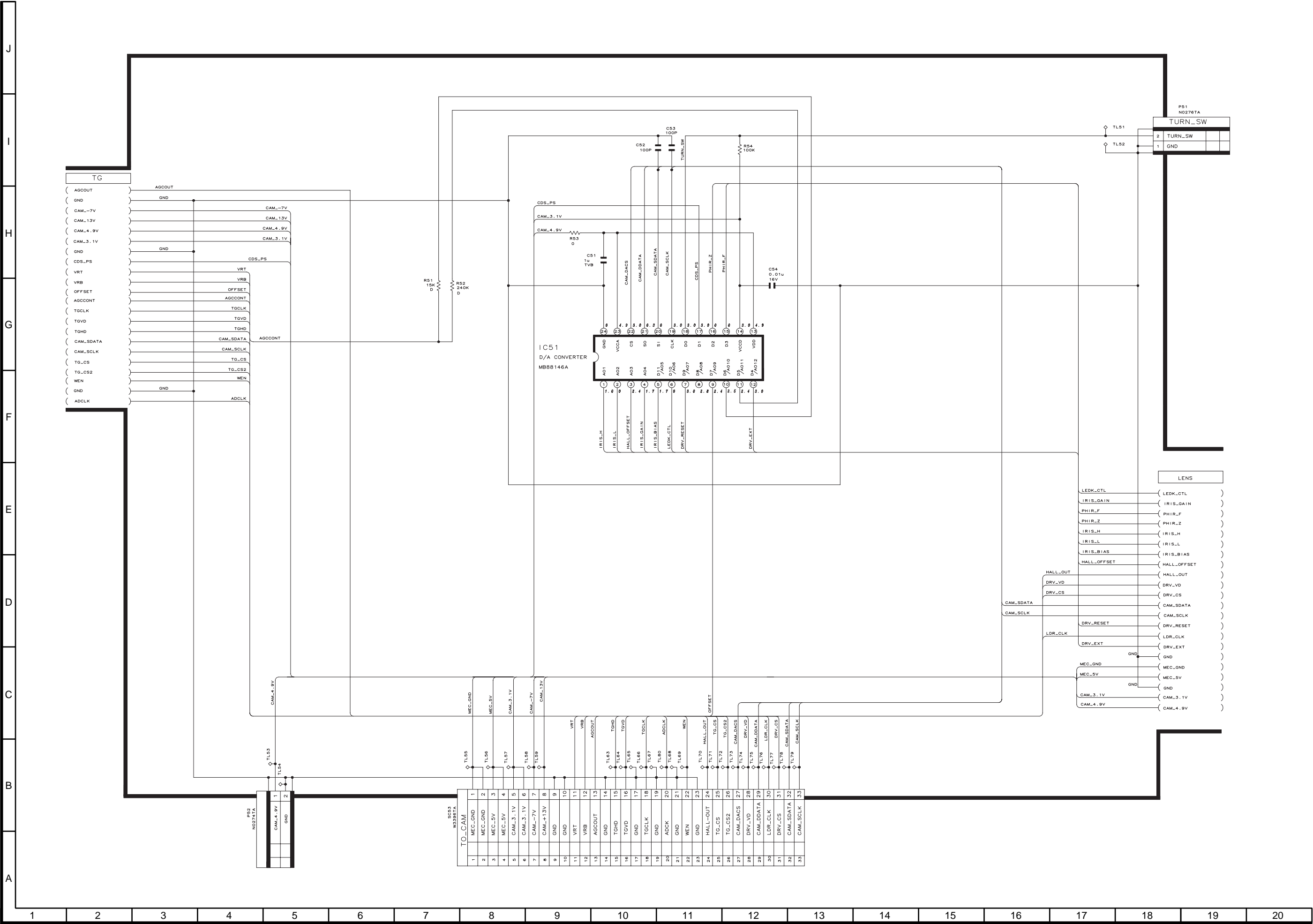
14-20. USB SCHEMATIC DIAGRAM (VL-NZ100U/NZ150U only)



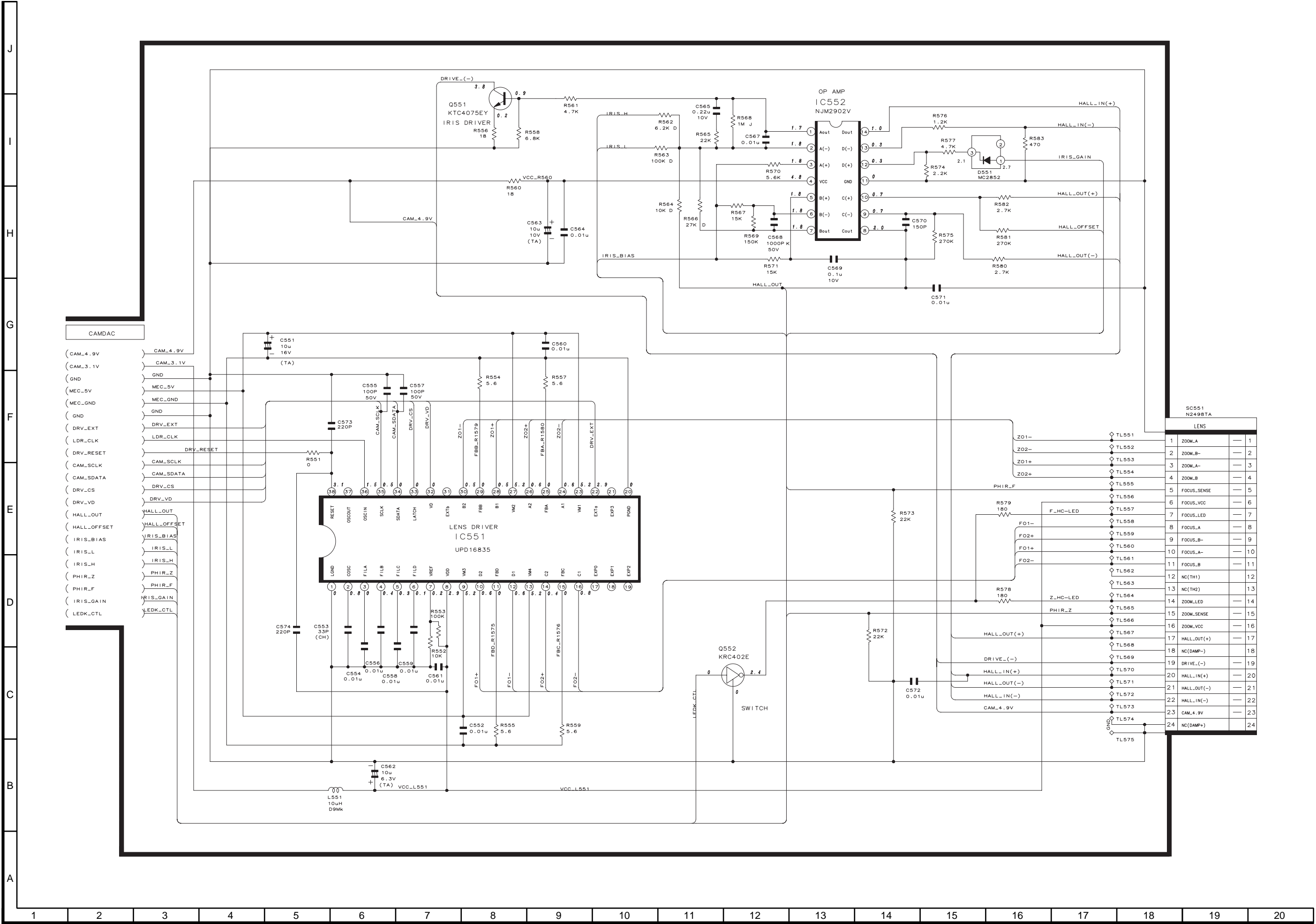
14-21. TG SCHEMATIC DIAGRAM



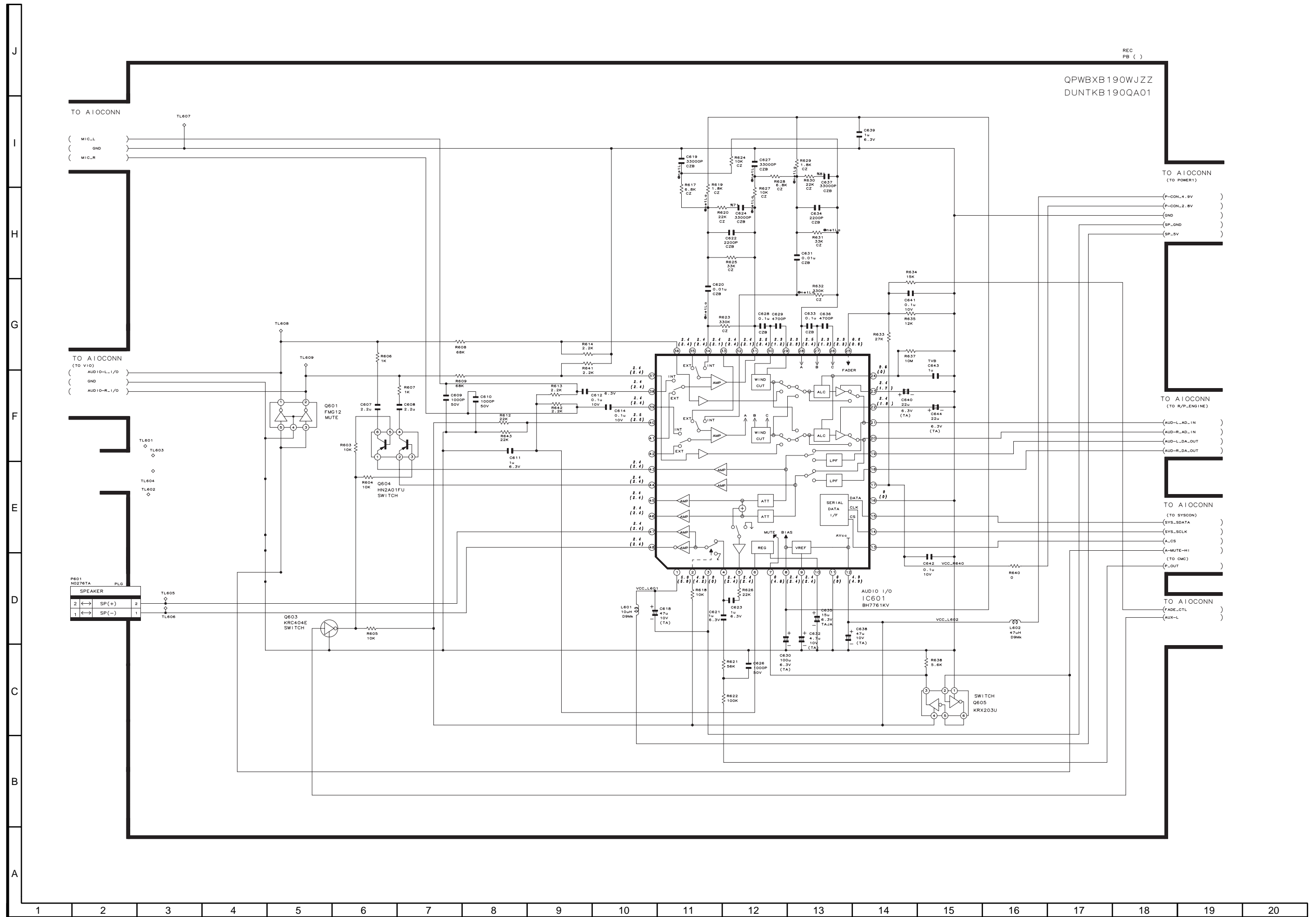
14-22. CAMERA DAC SCHEMATIC DIAGRAM



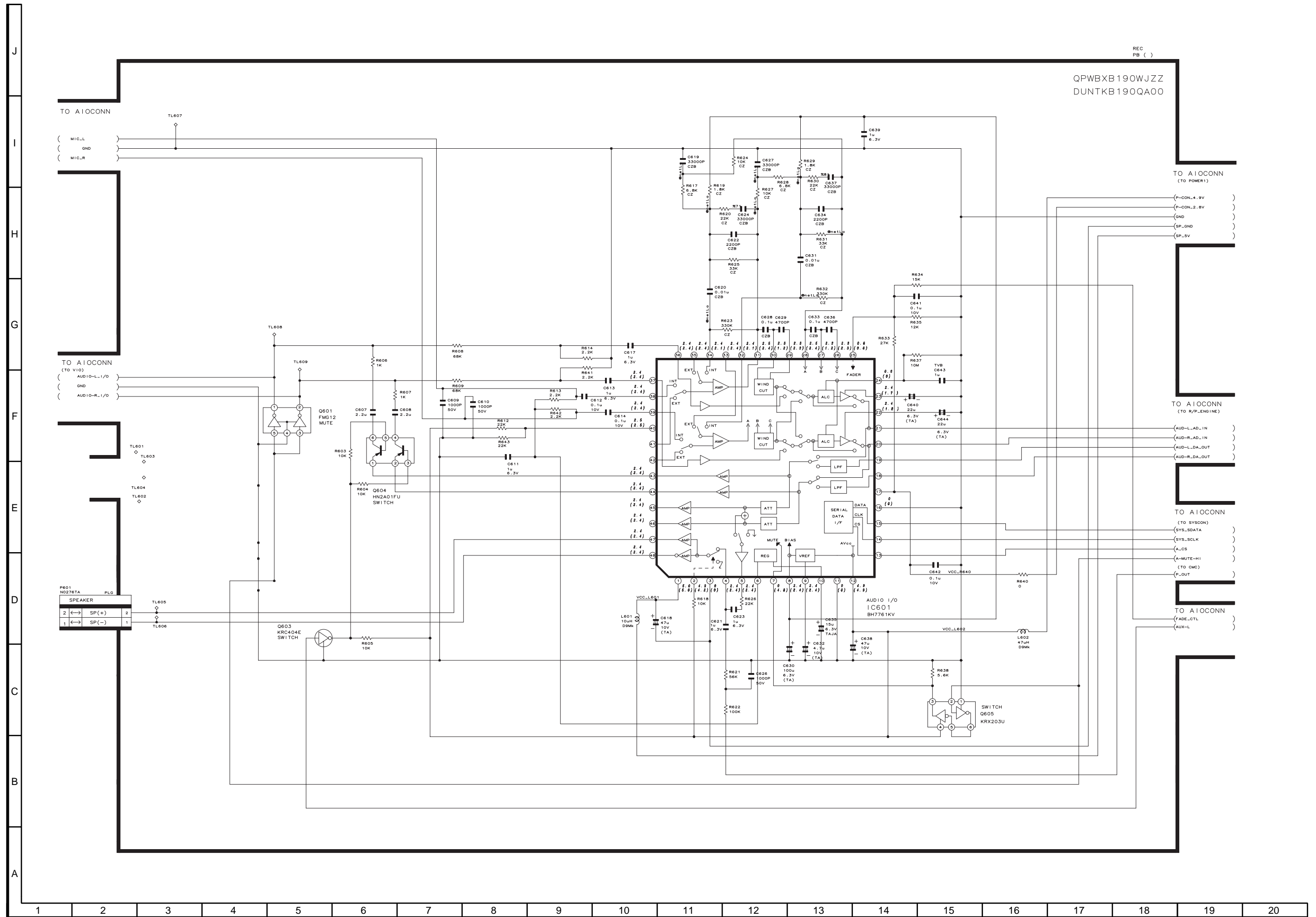
14-23. LENS DRIVE SCHEMATIC DIAGRAM



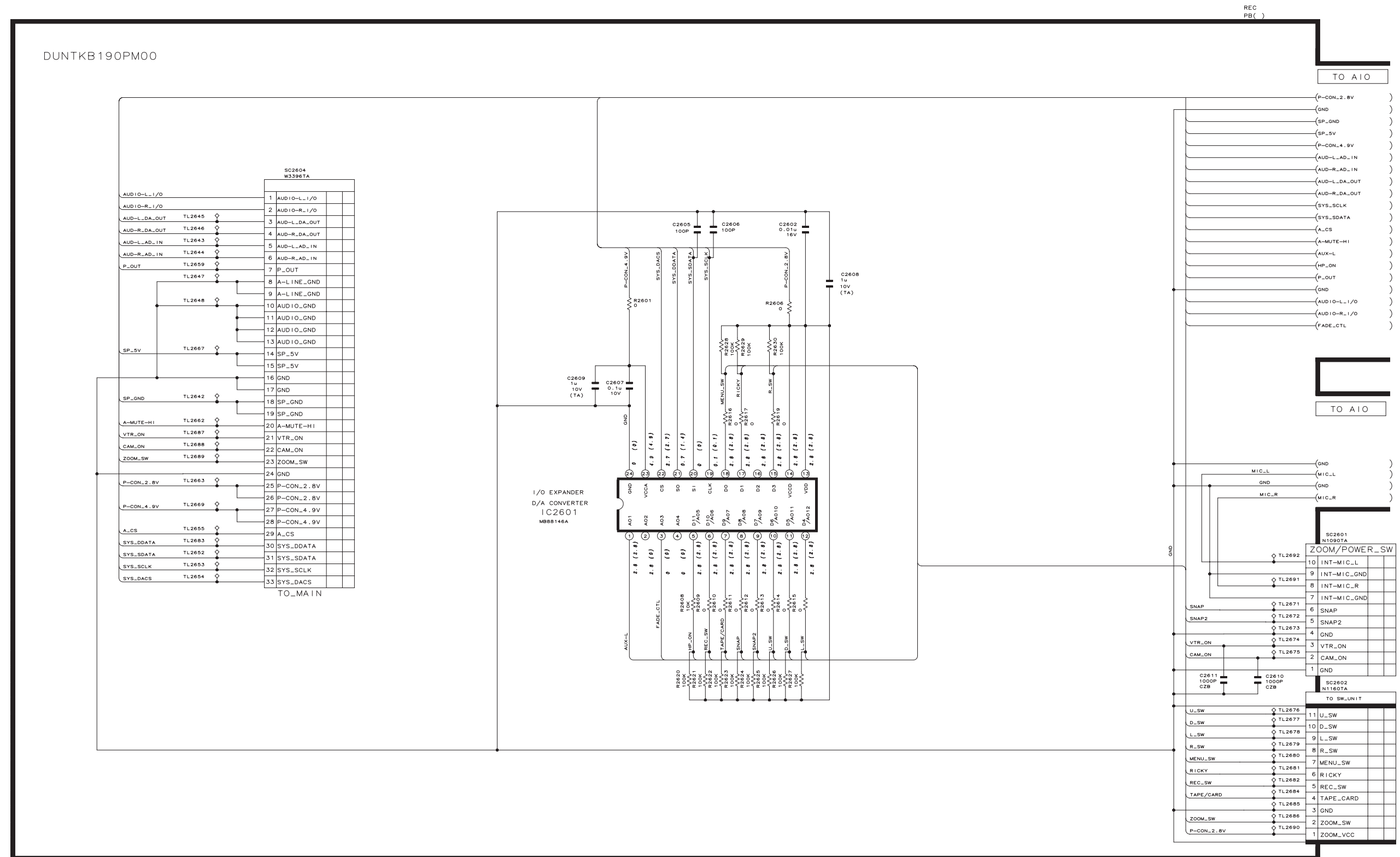
14-24. AUDIO I/O SCHEMATIC DIAGRAM (VL-NZ50U)



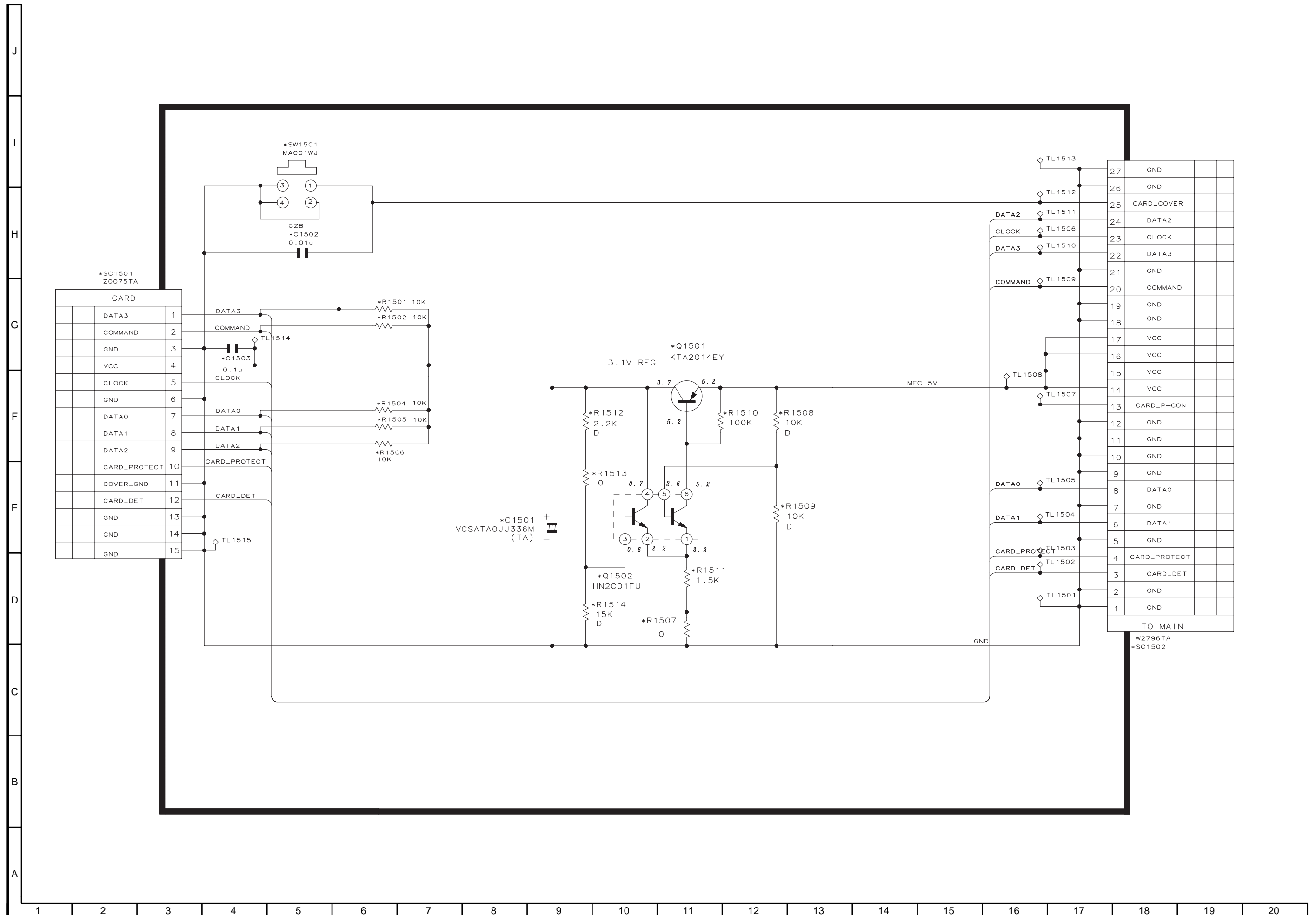
14-25. AUDIO I/O SCHEMATIC DIAGRAM (VL-NZ100U/NZ150U)



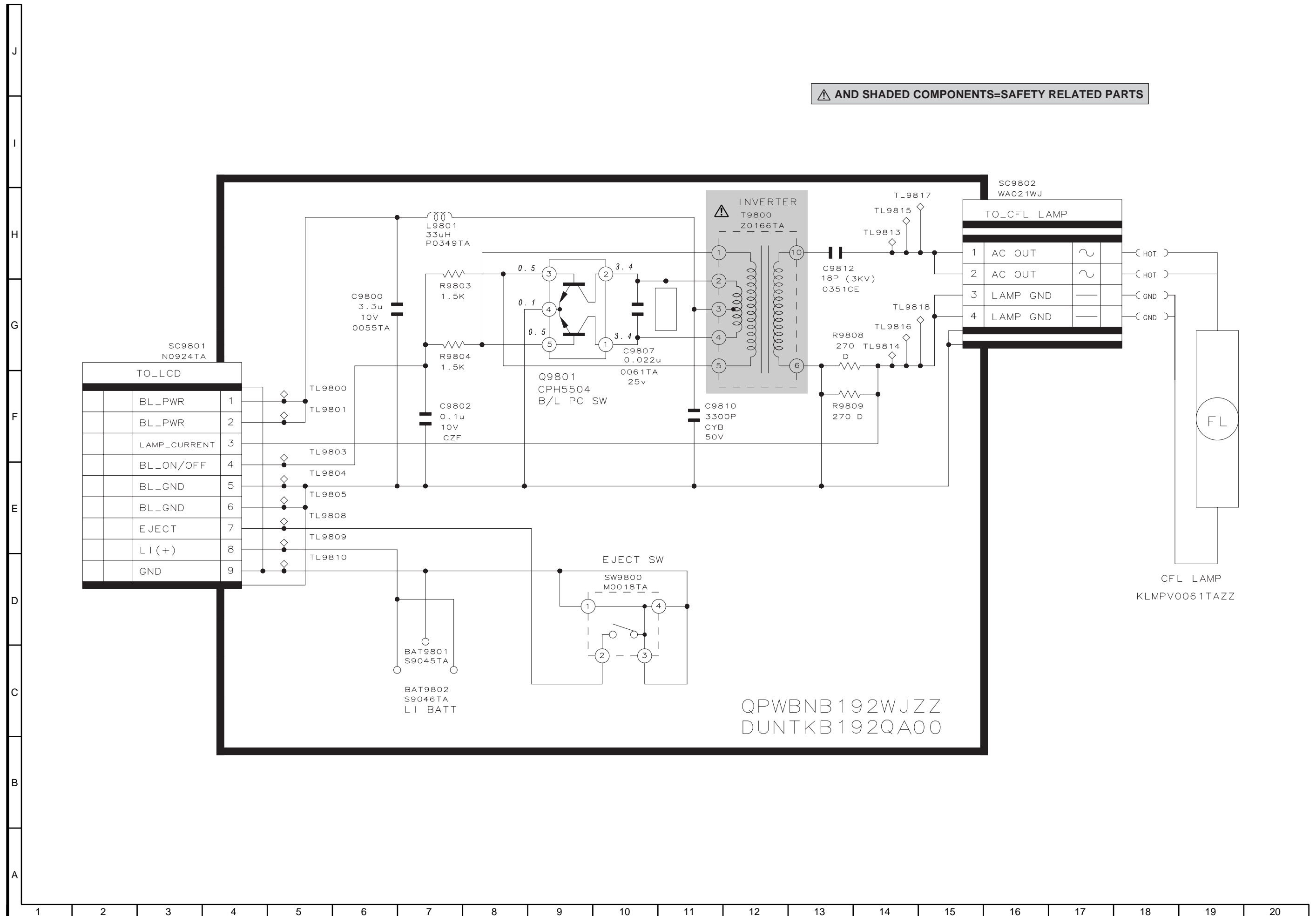
14-26. AUDIO I/O CONN SCHEMATIC DIAGRAM

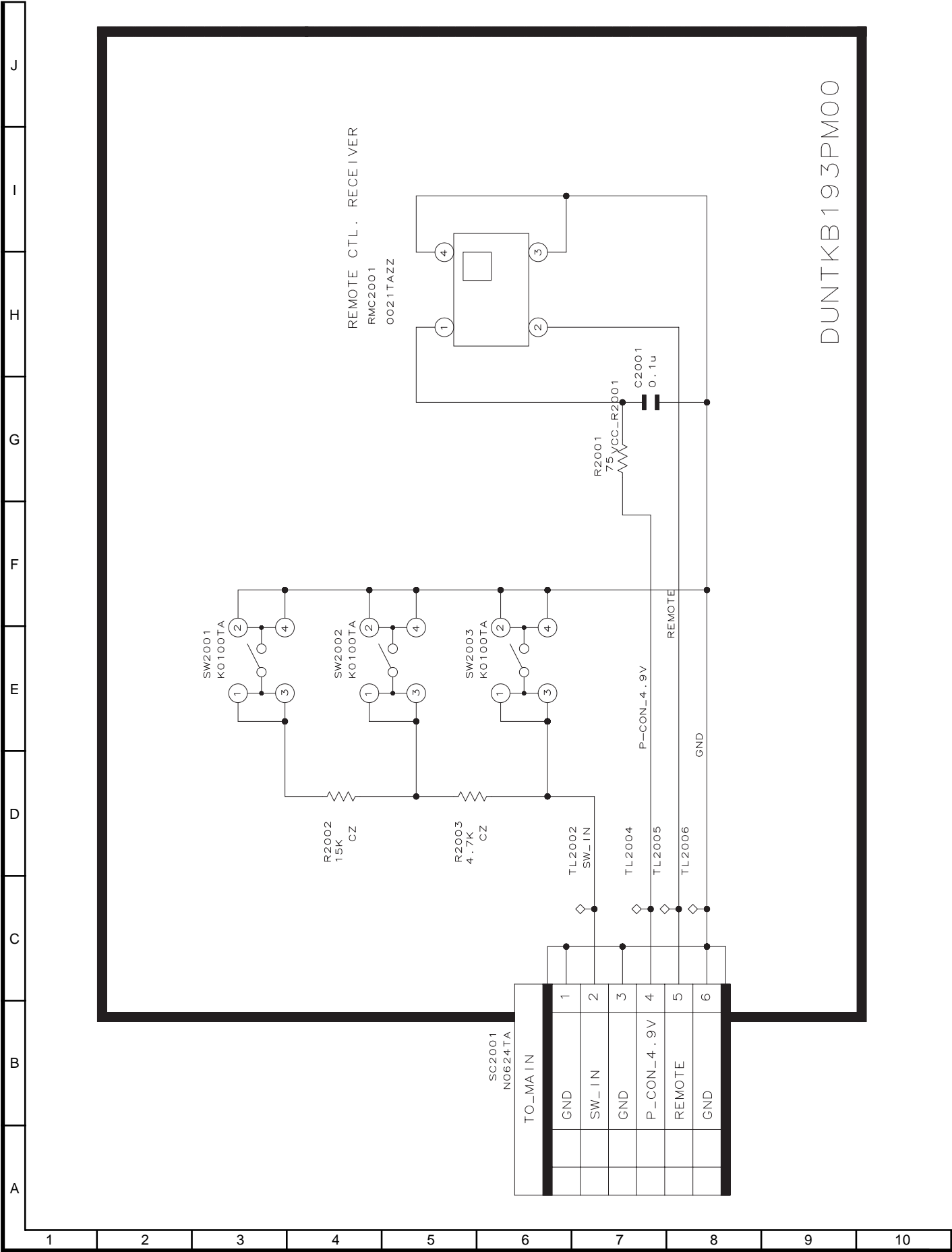


14-27. CARD SCHEMATIC DIAGRAM (VL-NZ100U/NZ150U only)

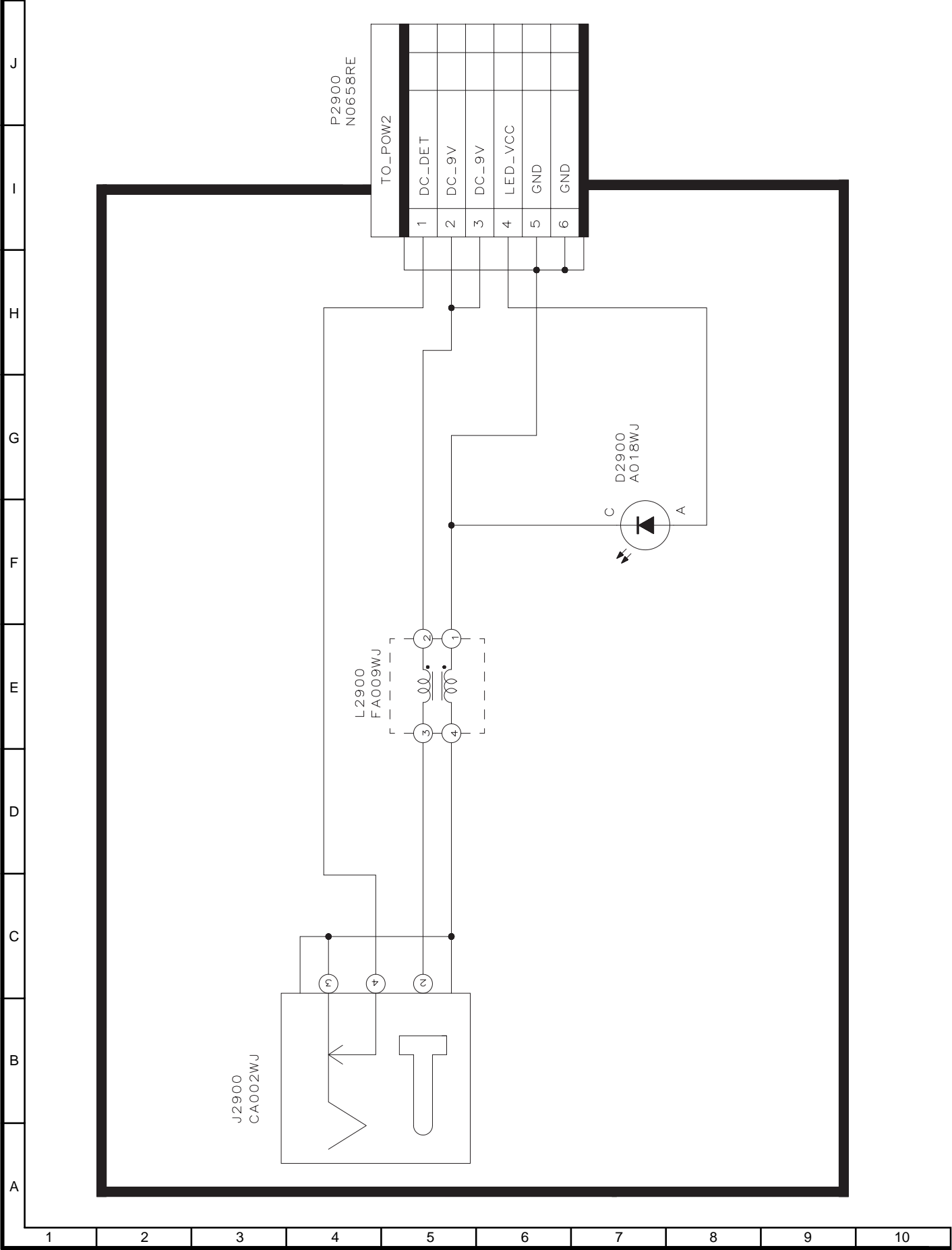


14-28. INVERTER SCHEMATIC DIAGRAM

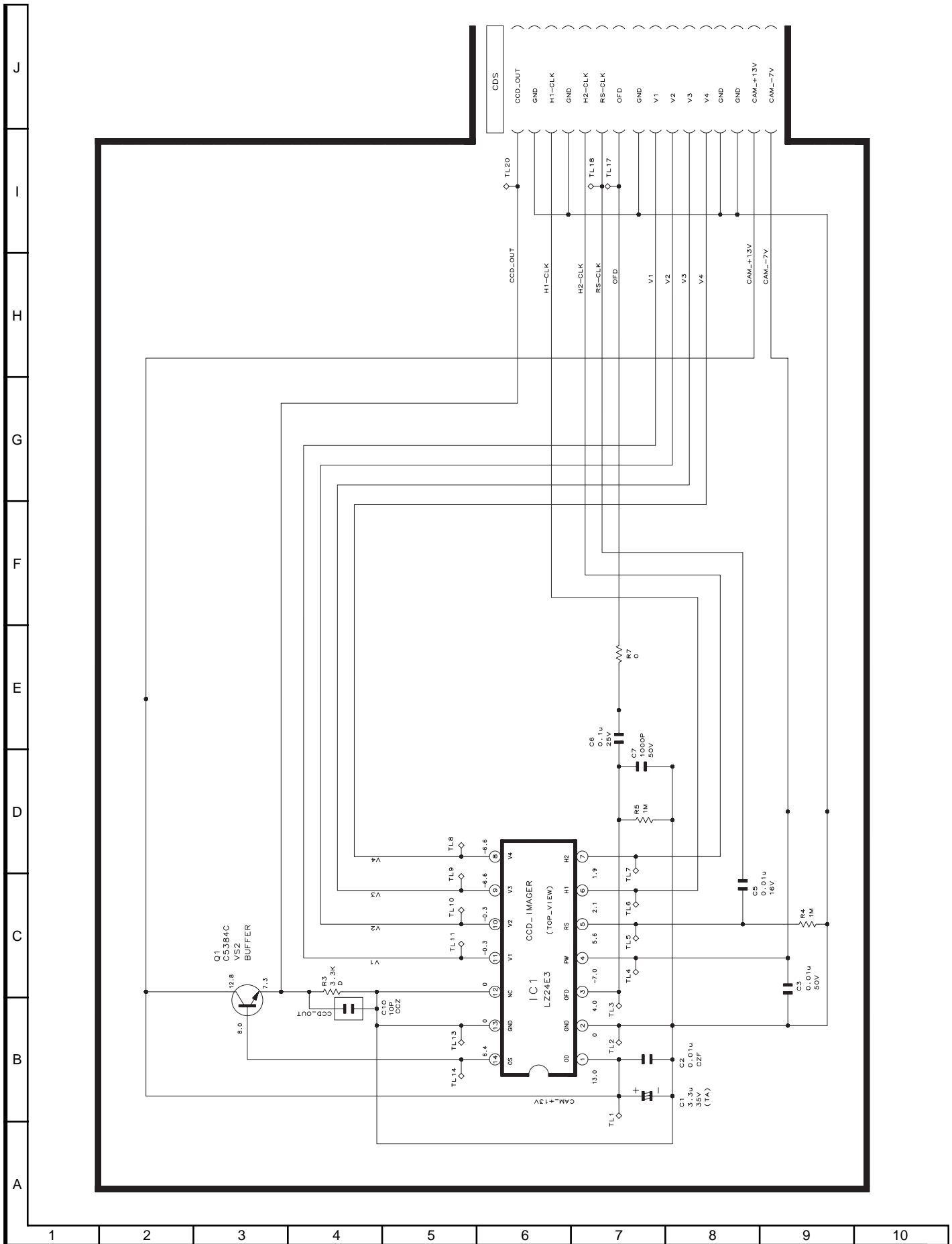




14-30. DC JACK SCHEMATIC DIAGRAM



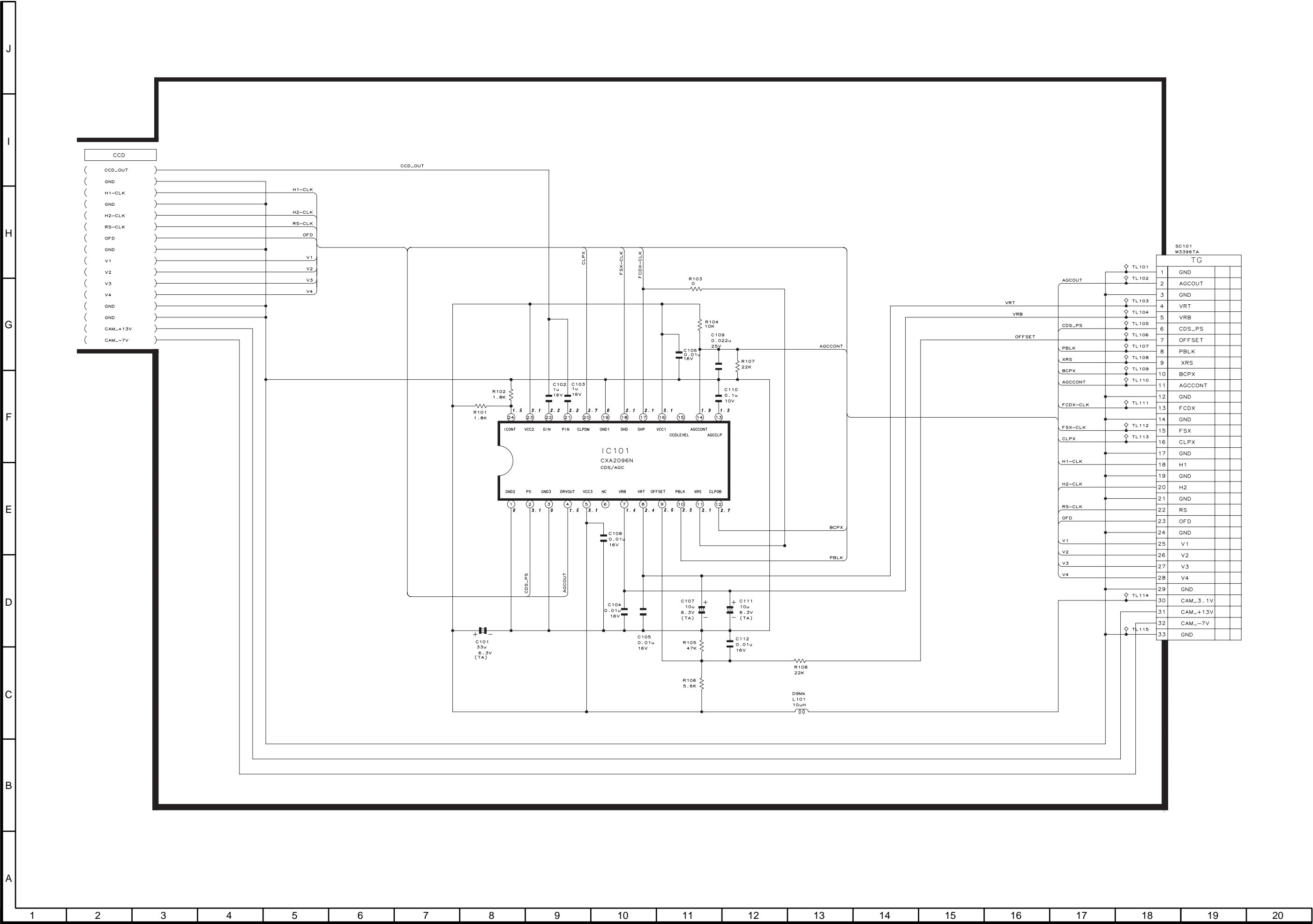
14-31. CCD SCHEMATIC DIAGRAM



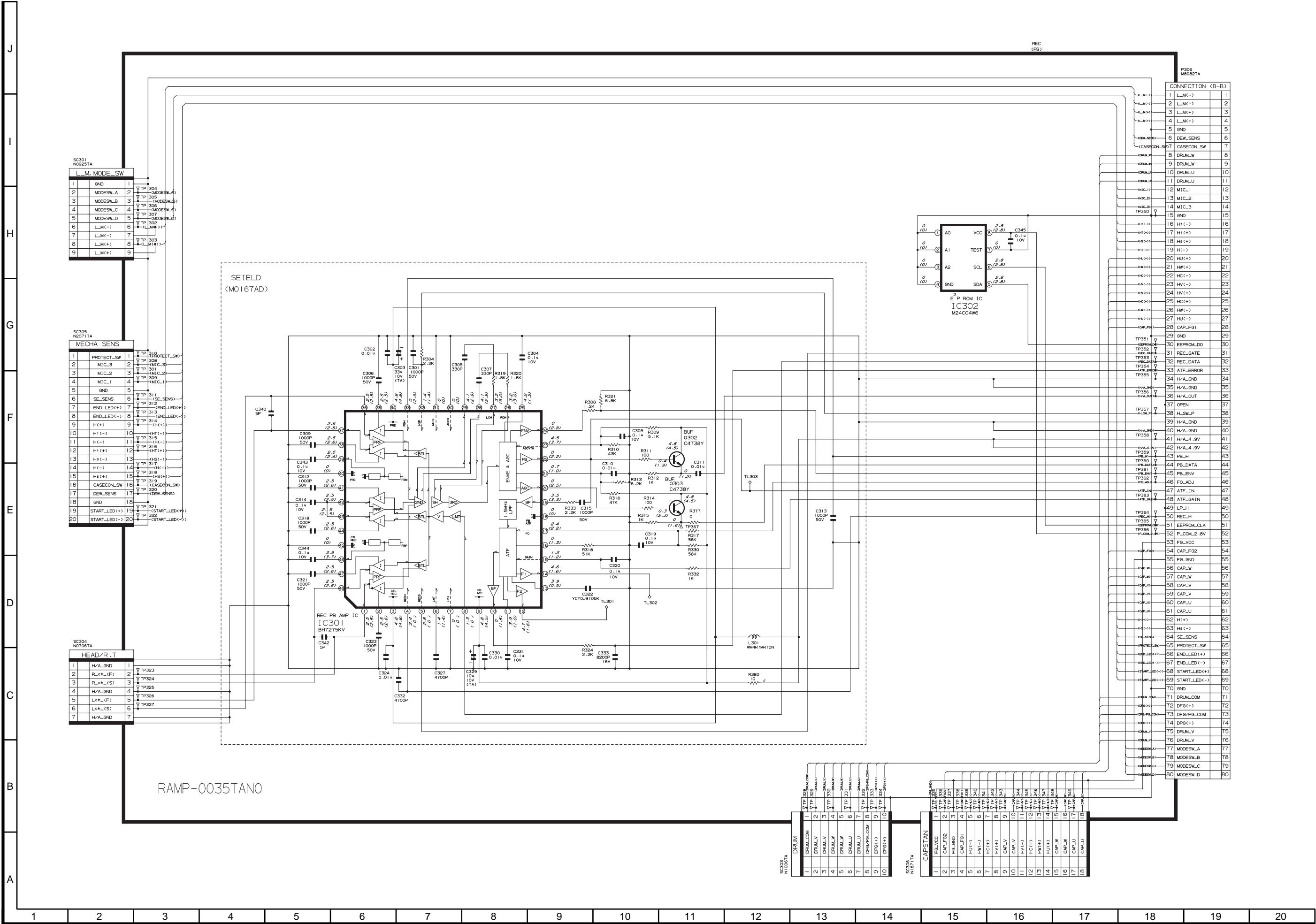
- M E M O -

This image shows a full page of white paper with horizontal dashed lines, typical of primary school handwriting practice paper. The lines are evenly spaced and run across the entire width of the page. There are no margins, text, or other markings present.

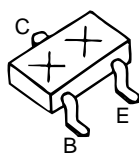
14-32. CDS SCHEMATIC DIAGRAM



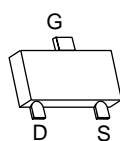
14-33. HEAD AMP SCHEMATIC DIAGRAM



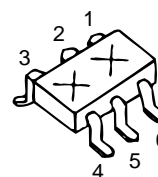
15. SEMICONDUCTOR LEAD IDENTIFICATION



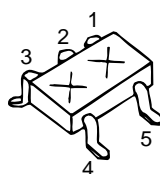
2SC4738Y KRC402E
FMMT717 KRC404E
FMMT619 KTA2014EY
2SC5384C KTC4075EY
2SC4213B RT1N144U
2SC5376B



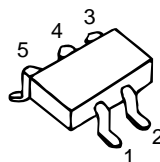
3LN01S
3LP01S



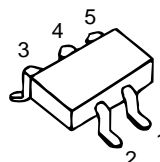
HN2A01FU RN4986
HN2C01FU MM1510XN
XP05534 MM1503XN
KRX203U
KTX101UY



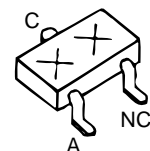
2SC4944Y TCSZ04U
TA75S01F
S80937AN
S817B28C



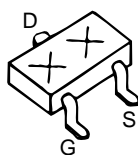
CPH5504



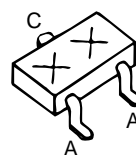
FMG12



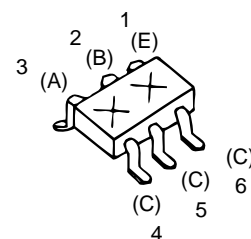
MC2852



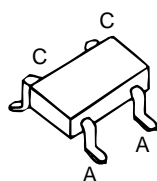
NDS332P
NDS355AN



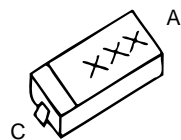
MA132WK
KDR732



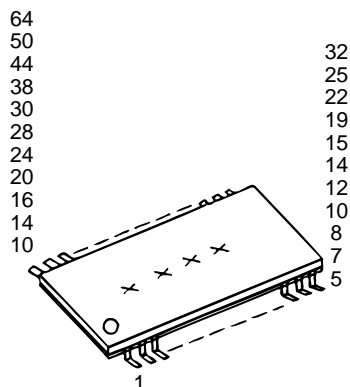
CPH6702



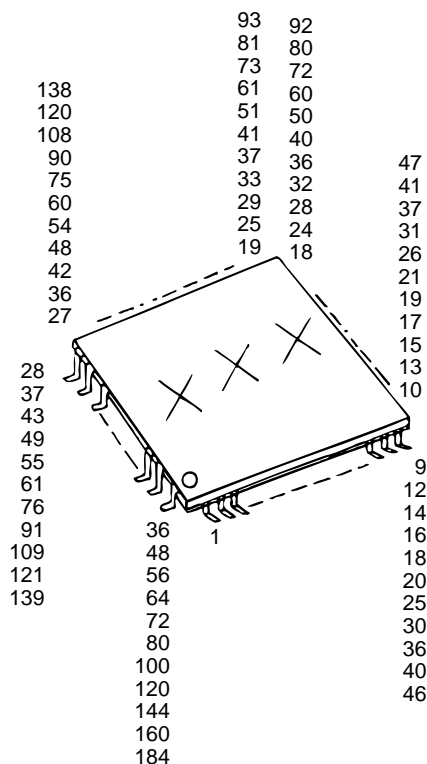
MA4S159



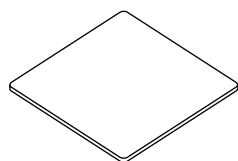
KV1812K HVU362
EX1394CE
HVC359TR
HVU359TR



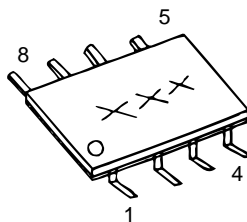
UPD16835 ADC08351
NJM2902V CXA2096N
LV4051AT PCM3008
MB88146A IX0940TA
MM1323XV



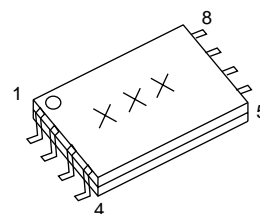
BH7277KV CXD2489R
MB3881++ LB11990W
PT8214 BH7761KV
IX0947TA ADS933Y



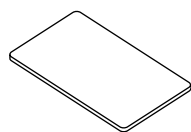
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IX0809TA
IXA149WJ
IXA180WJ
IXA181WJ
IXA184WJ



TLC2940
BR24C32F

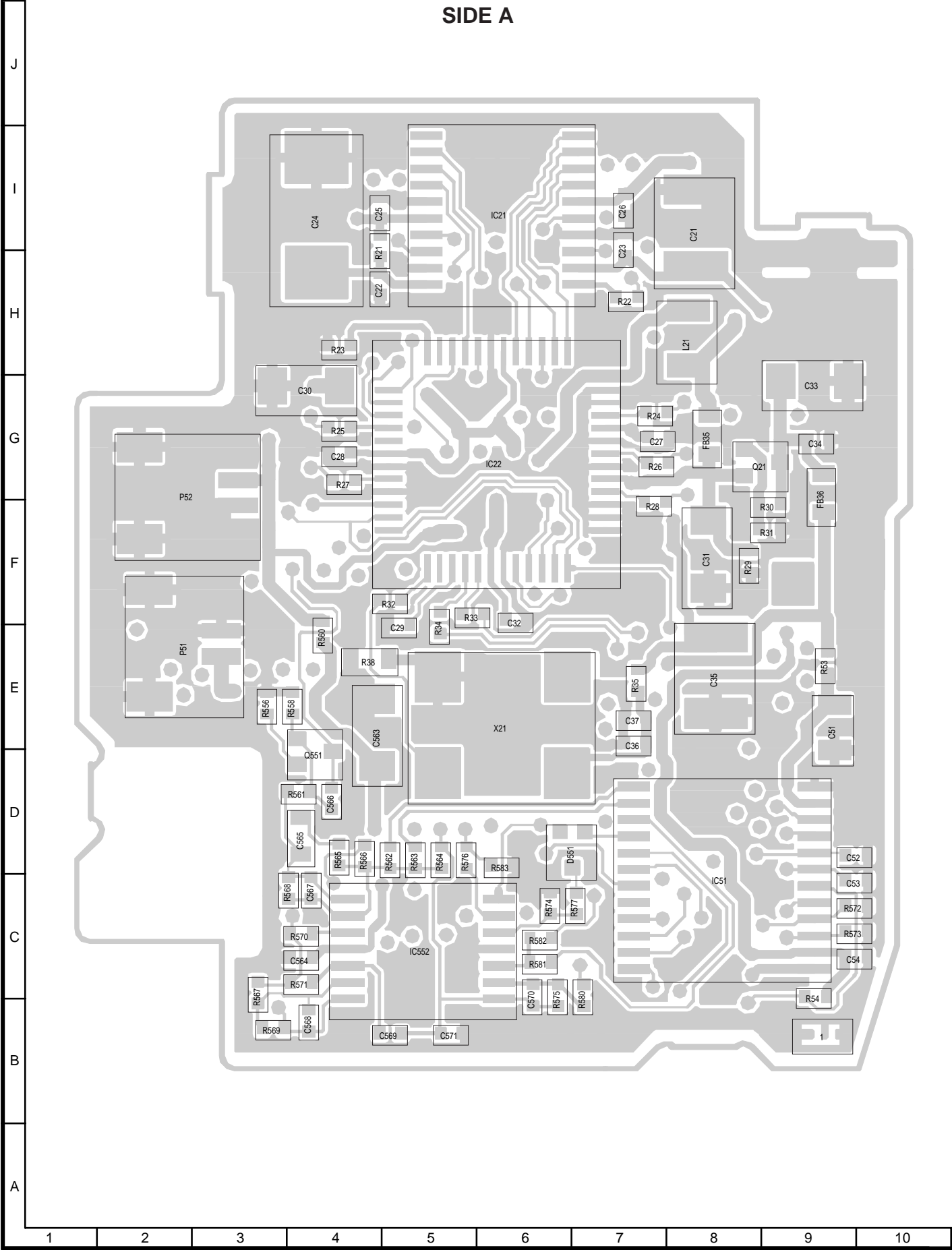


RS5C313/
NJU7015R
NJM2143R
SN2G04CT
SN2G53CT

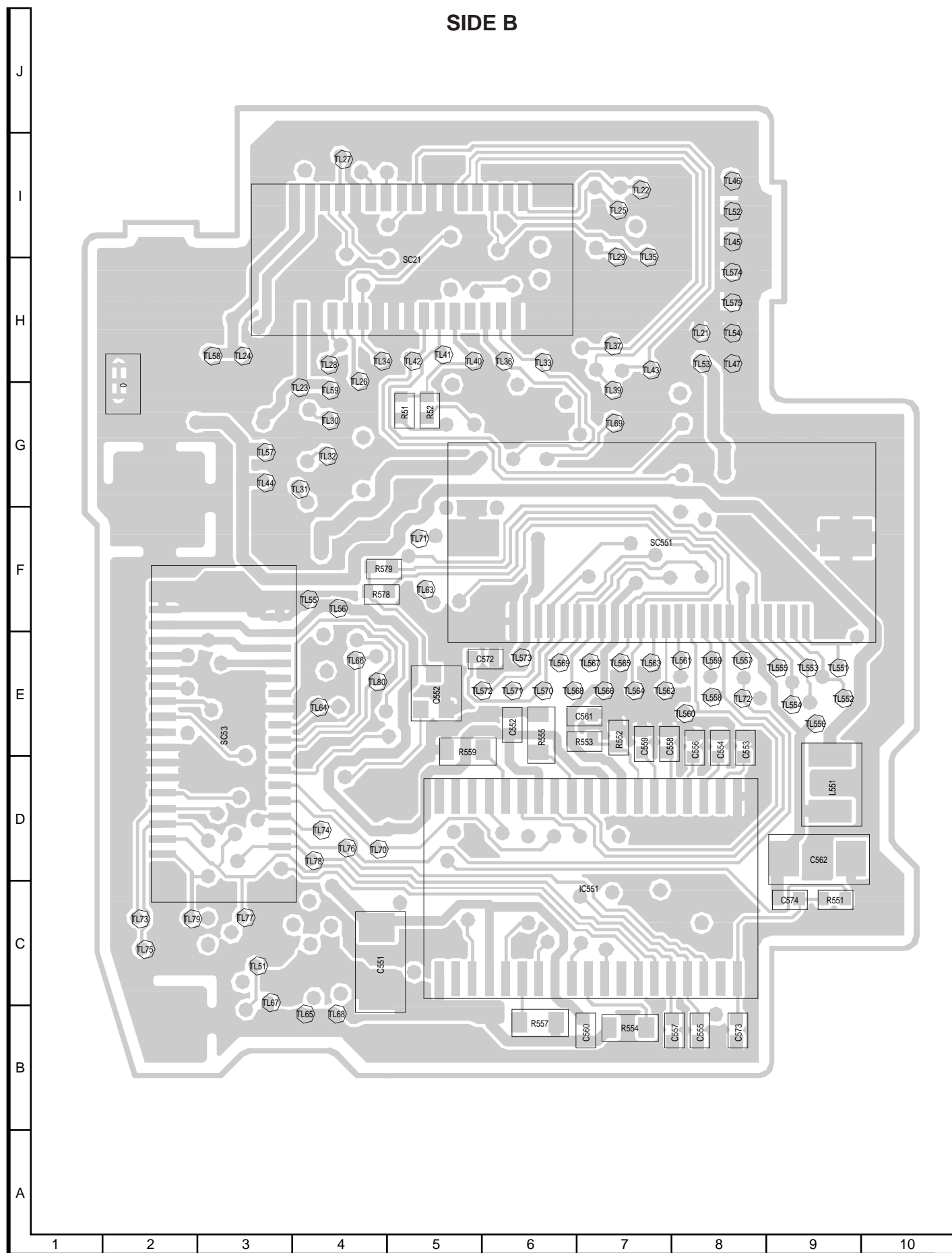


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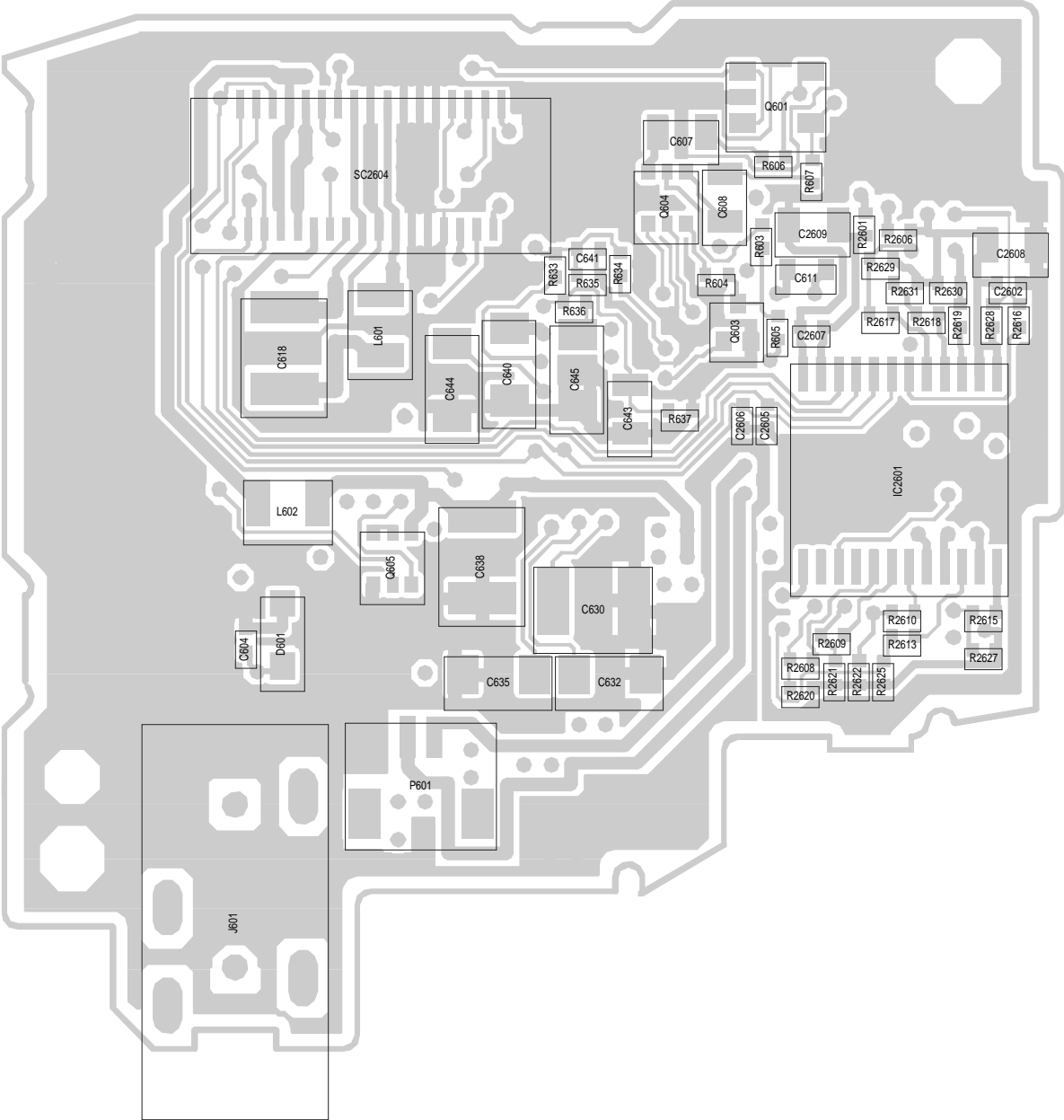
SIDE A



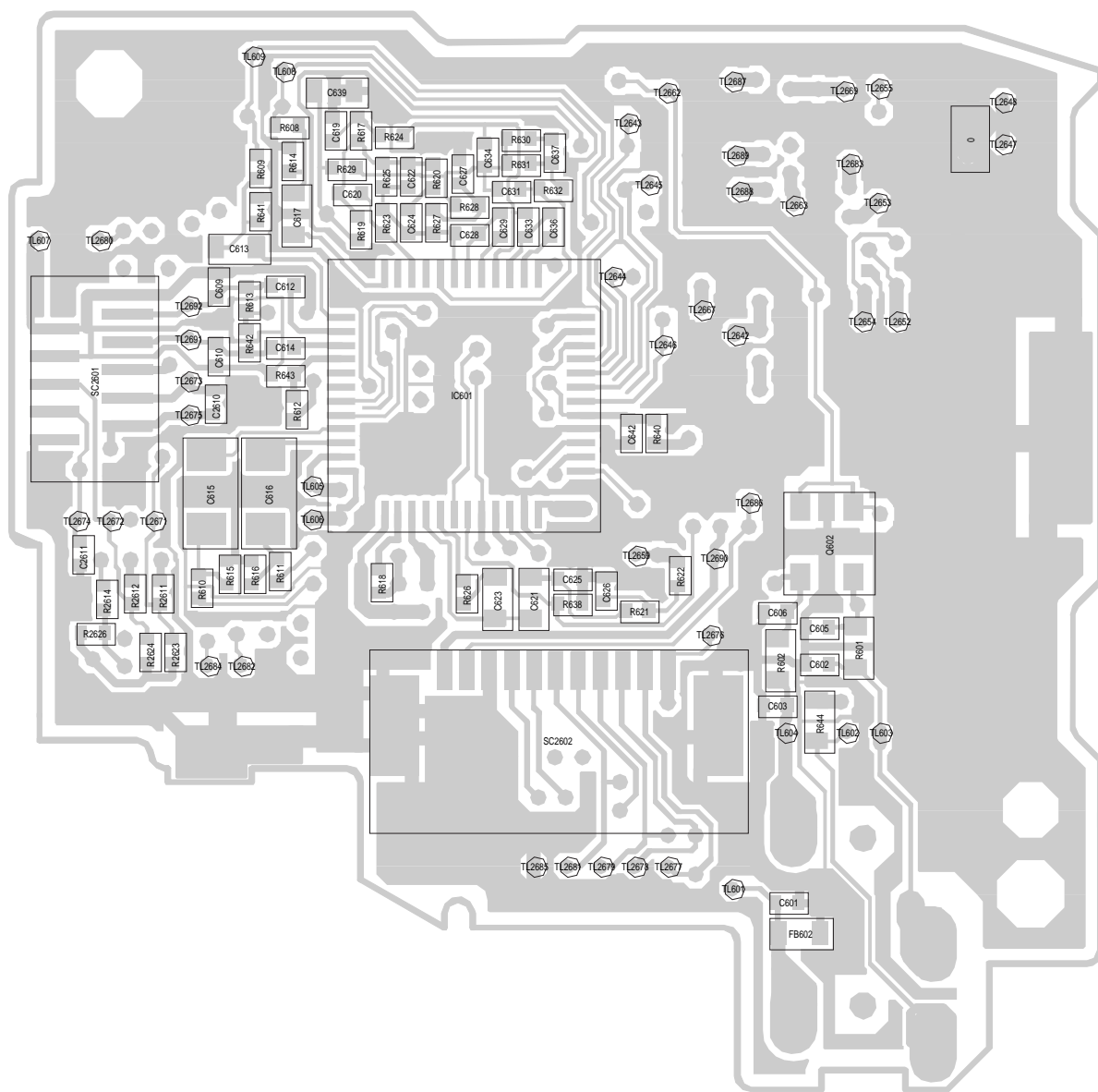
SIDE B



SIDE A

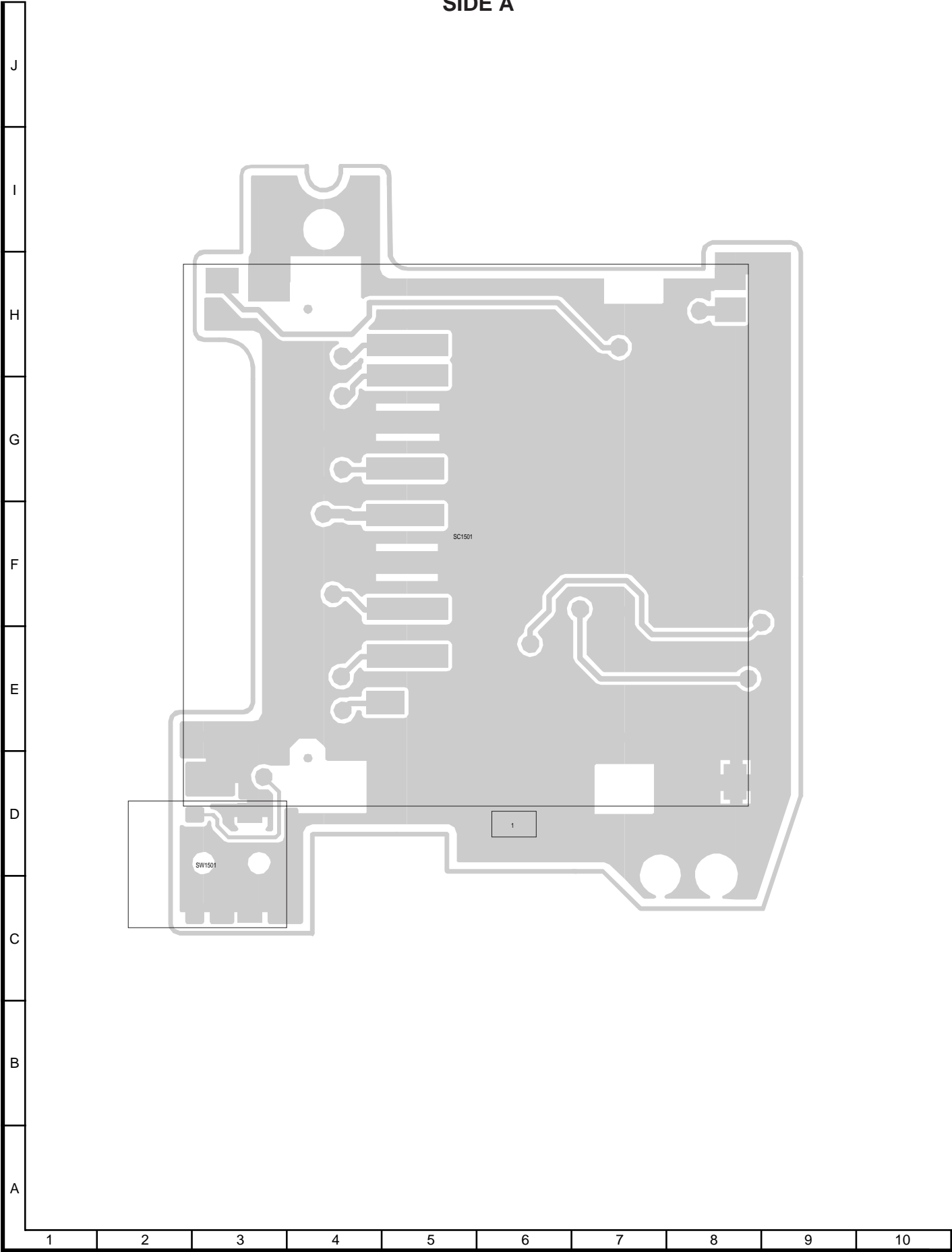


SIDE B

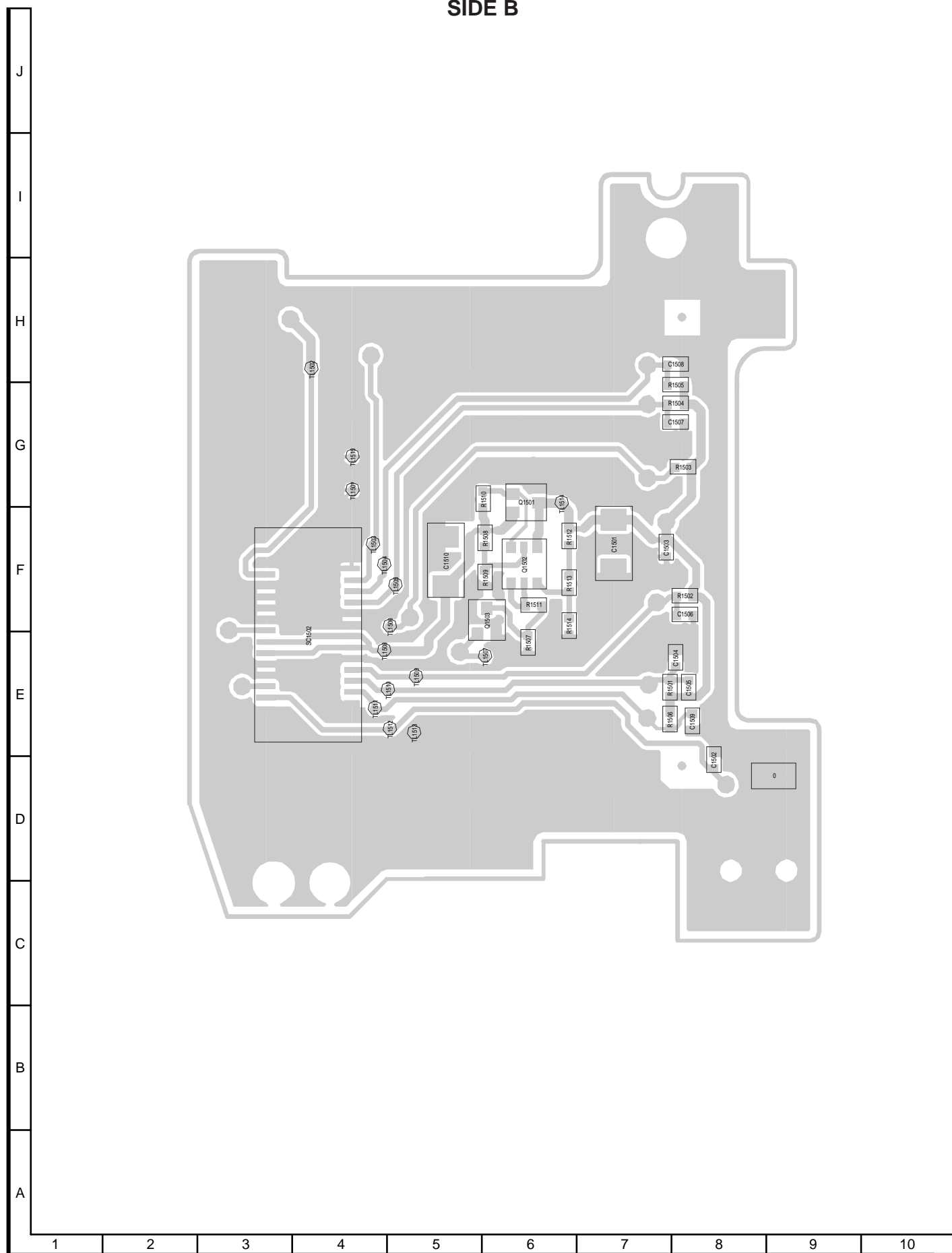


CARD PWB

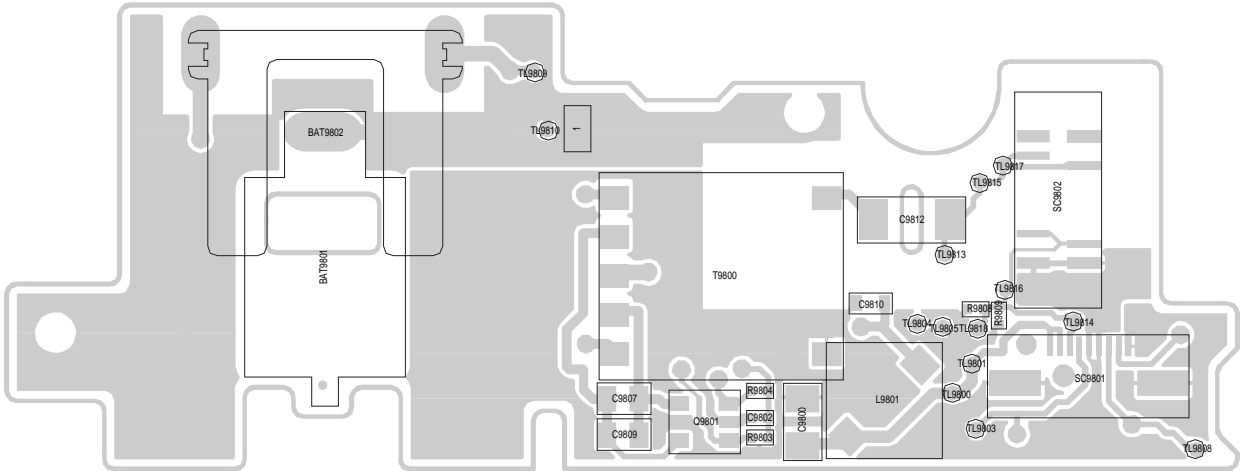
SIDE A



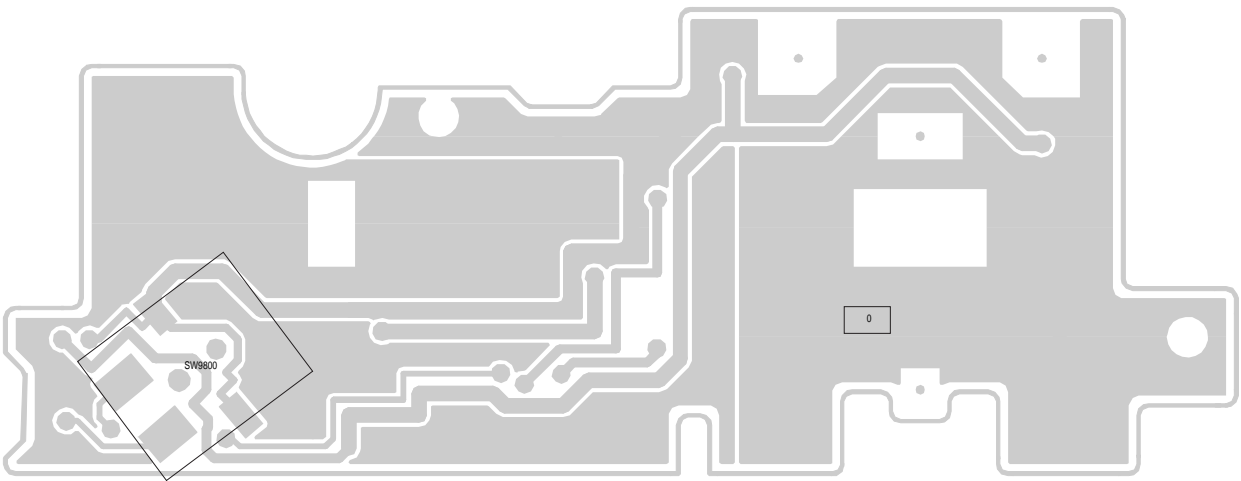
SIDE B



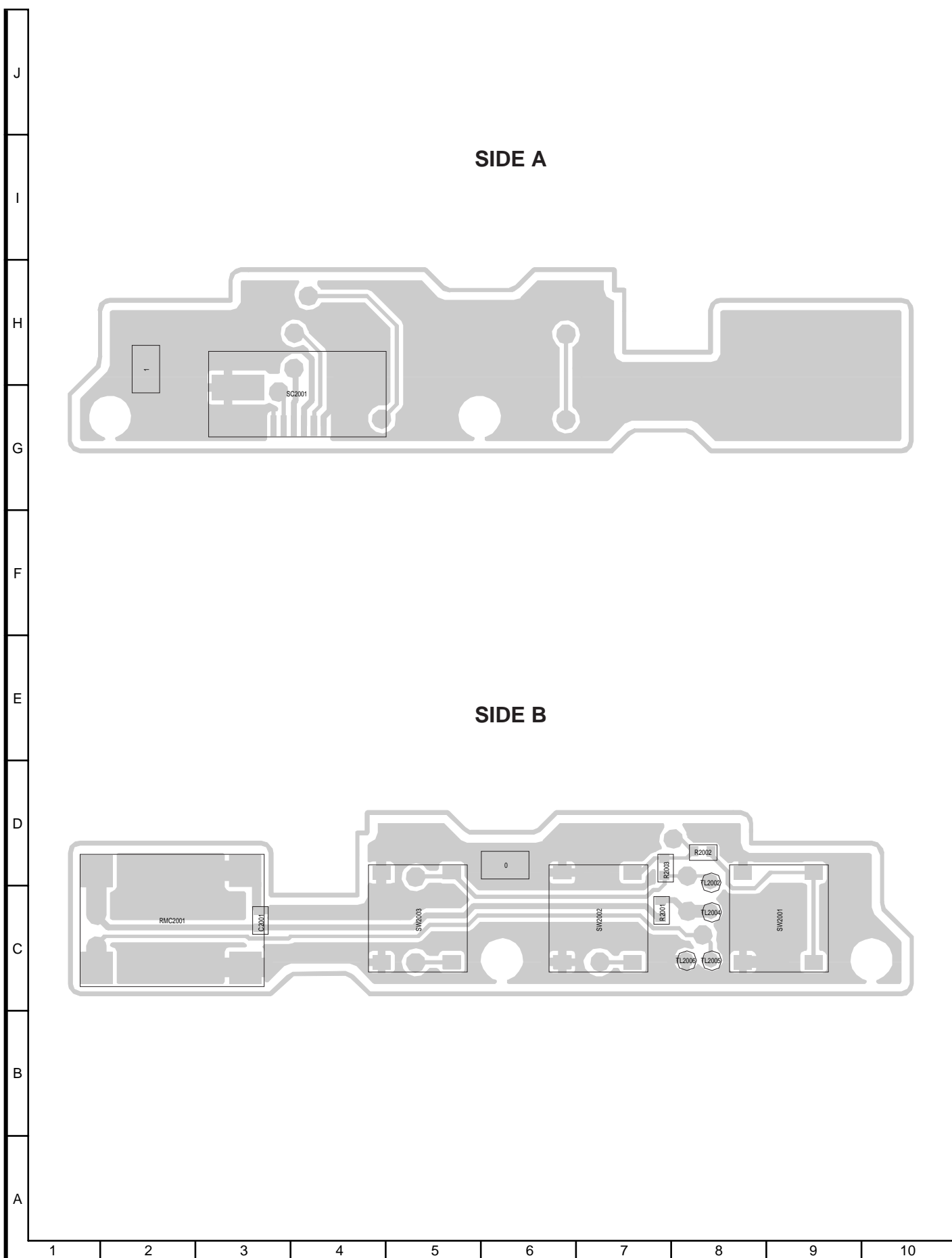
SIDE A



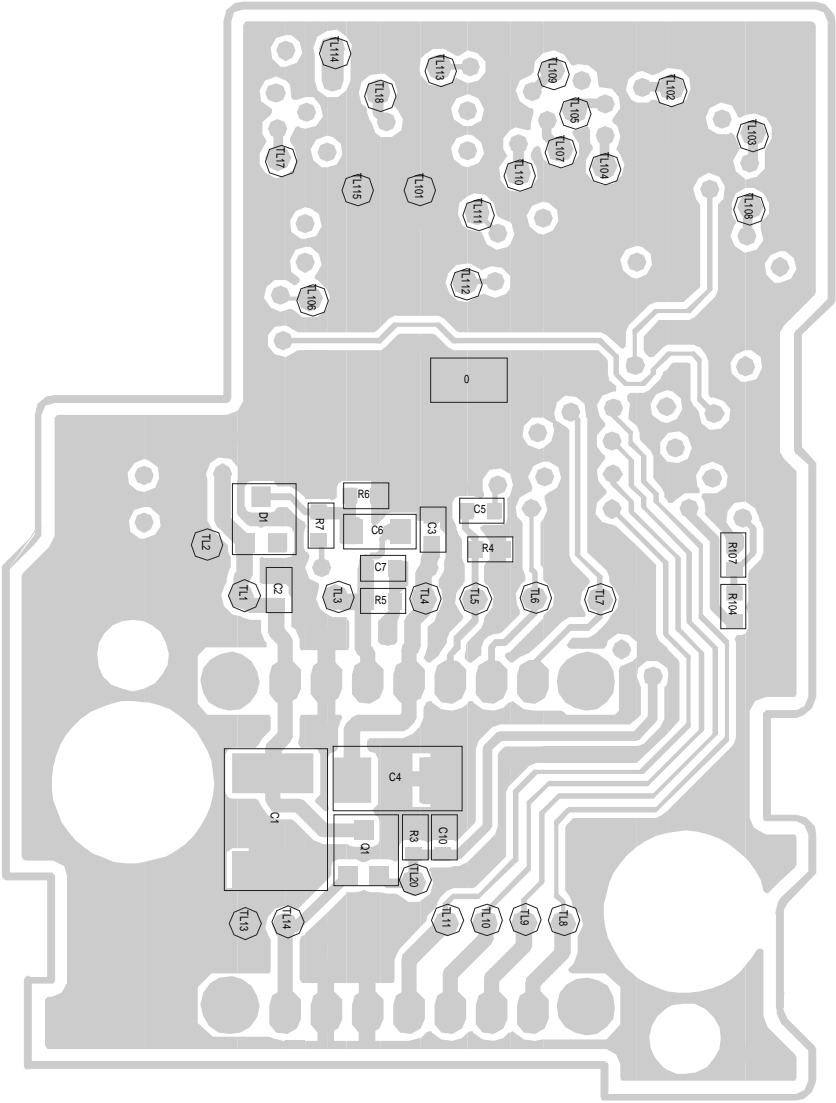
SIDE B

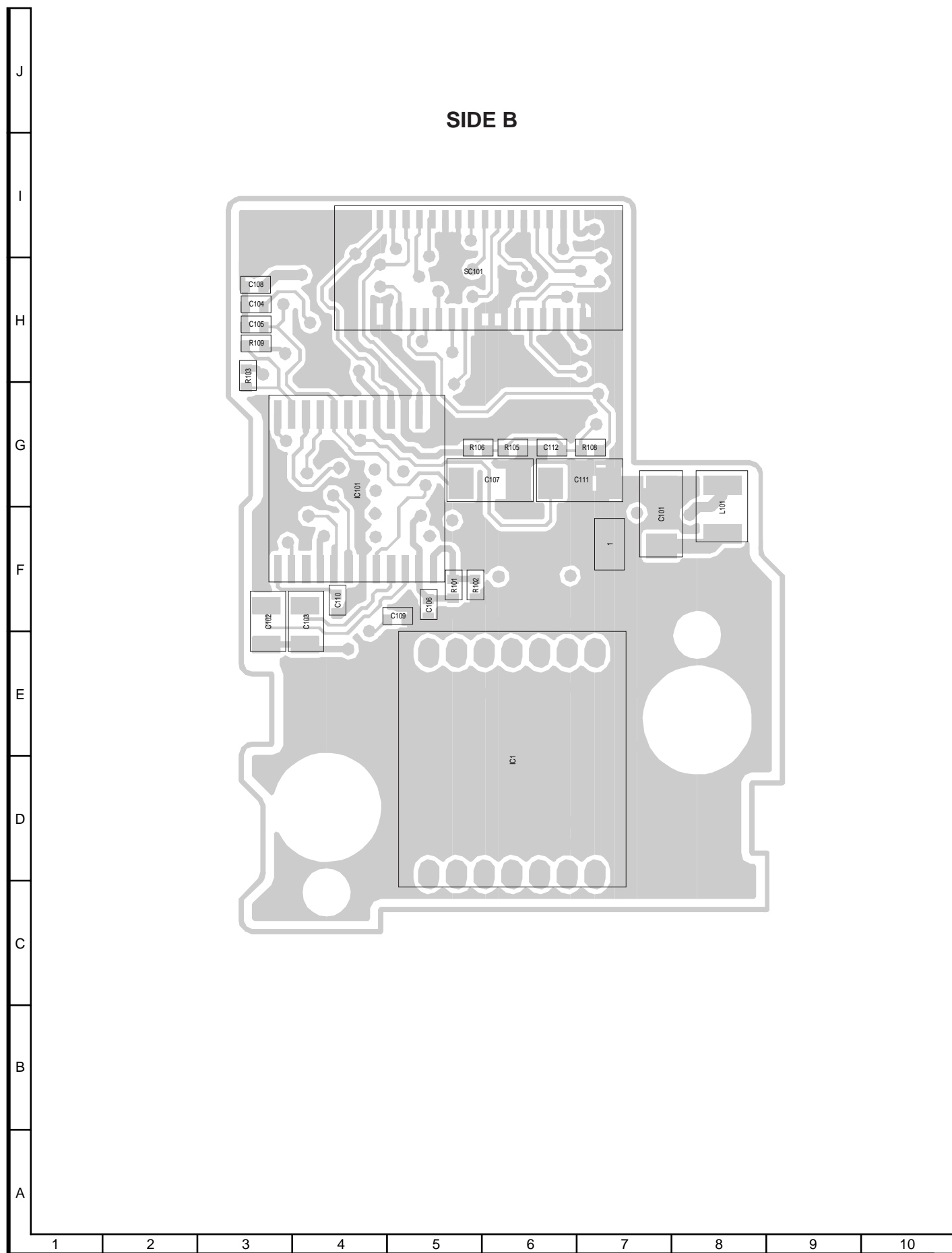


OPERATION PWB

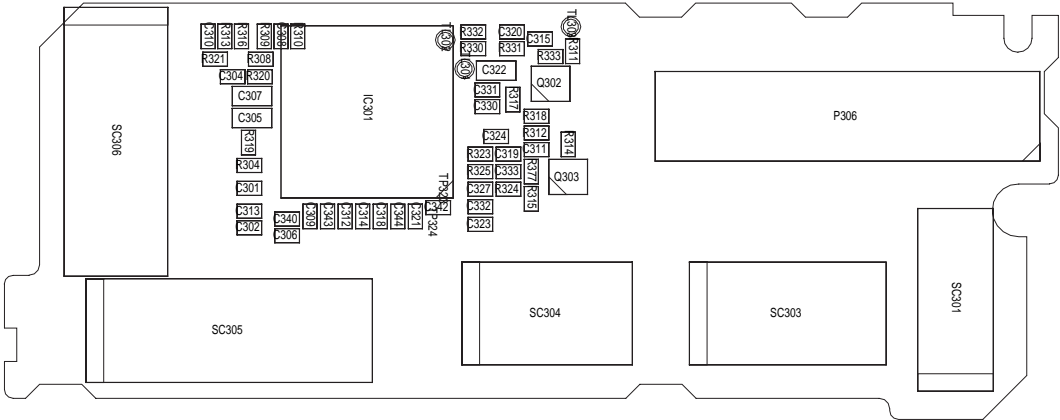


SIDE A

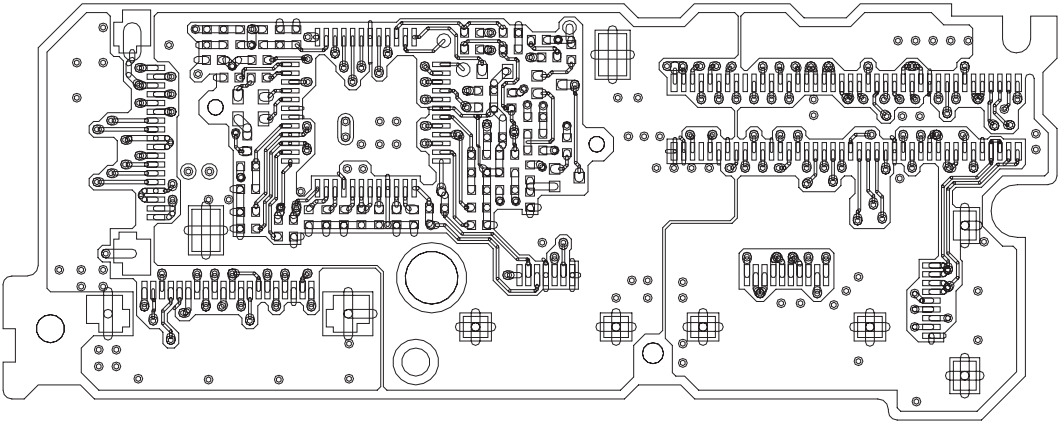




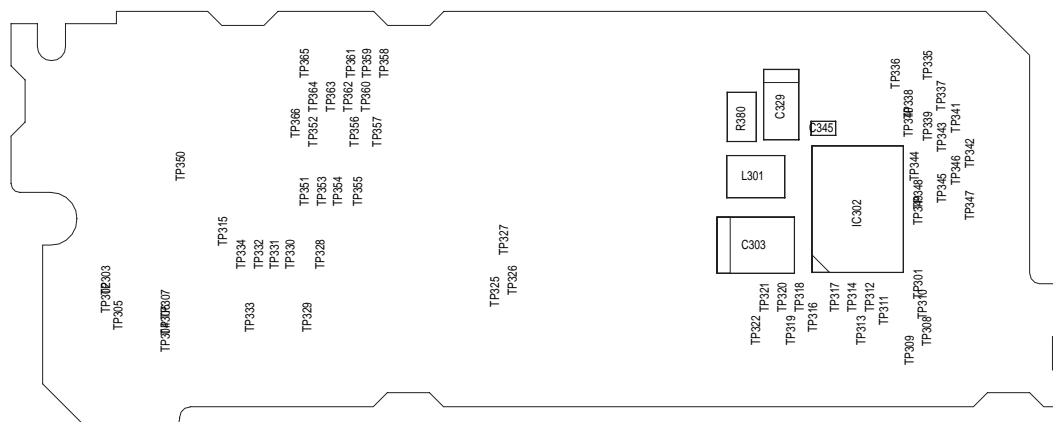
Component Side SIDE A



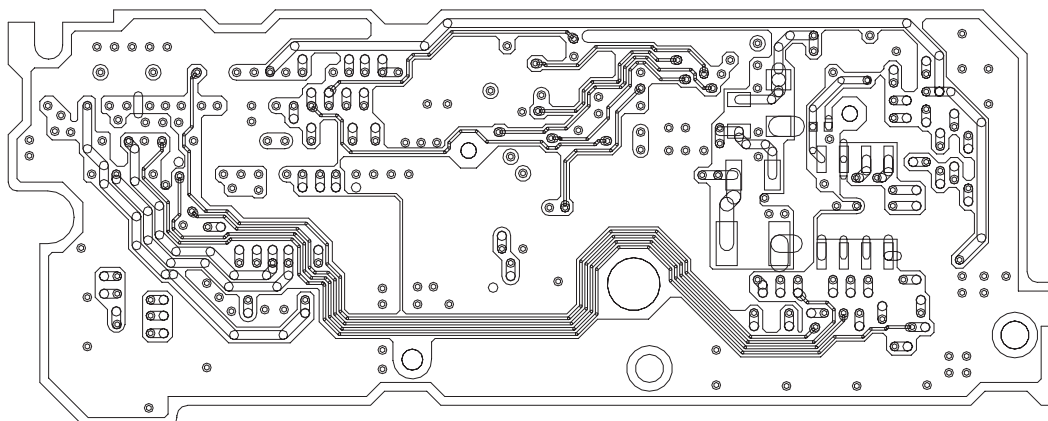
Wiring Side SIDE A



Component Side SIDE B



Wiring Side SIDE B



J

SIDE A

I

H

G

F

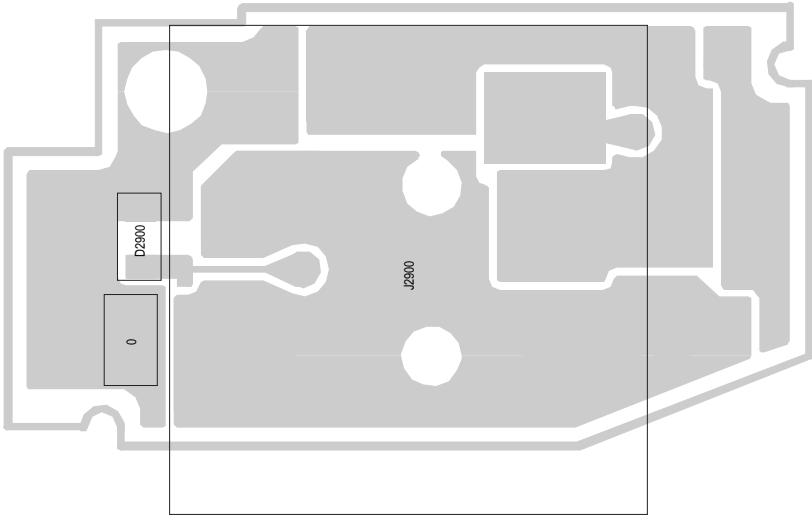
E

D

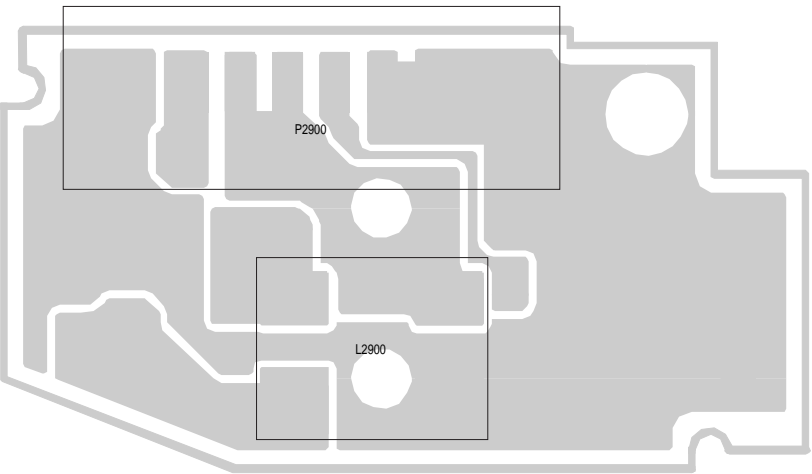
C

B

A



SIDE B



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17. REPLACEMENT PARTS LIST/ EXPLODED VIEWS

ELECTRICAL PARTS LIST

Parts marked with "△" are important for maintaining the safety of the set. Be sure to replace these parts with specified ones for maintaining the safety and performance of the set.

Les pièces marquées "△" sont importantes pour maintenir la sécurité de l'appareil. Ne remplacer ces pièces que par des pièces dont le numéro est spécifié pour maintenir la sécurité et protéger le bon fonctionnement de l'appareil.

" HOW TO ORDER REPLACEMENT PARTS "

in USA: Contact your nearest SHARP Parts Distributor. For location of SHARP Parts Distributor, Call Toll-free 1-IBE800-SHARP

in CANADA: Contact SHARP Electronics of Canada Limited Phone (416) 890-2100.

★MARK : SPARE PARTS-DELIVERY SECTION:ALL JAPAN

To have your order filled promptly and correctly, please furnish the following informations.

- | | |
|-----------------|----------------|
| 1. MODEL NUMBER | 2. REF. NO. |
| 3. PART NO. | 4. DESCRIPTION |
| 5. PRICE CODE | |

△ MARK: SAFETY RELATED PARTS
△ PIECES: RELATIVES A LA SECURITE

PWB ASSEMBLY IS NOT REPLACEMENT ITEM
L'ASSEMBLAGE P.C.I. EST UN ARTICLE NON REMPLACABLE

Ref. No.	Part No.	★	Description	Code
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PRINTED WIRING BOARD ASSEMBLIES (NOT REPLACEMENT ITEM)

DUNTKB187QA00	MAIN PWB Unit (VL-NZ100U/C)	—
DUNTKB187QA01	MAIN PWB Unit (VL-NZ50U/C)	—
DUNTKB187QA02	MAIN PWB Unit (VL-NZ100K)	—
DUNTKB187QA03	MAIN PWB Unit (VL-NZ150U)	—
DUNTKB189QA00	CAMERA HEAD PWB Unit	—
DUNTKB190QA00	AUDIO I/O PWB Unit (VL-NZ100U/C/K/NZ150U)	—
DUNTKB190QA01	AUDIO I/O PWB Unit (VL-NZ50U/C)	—
DUNTKB191PM00	CARD PWB Unit (VL-NZ100U/C/K/NZ150U)	—
DUNTKB192QA00	INVERTER PWB Unit	—
DUNTKB193PM00	OPERATION PWB Unit	—
DUNTKB246PM00	DC JACK PWB Unit	—
DUNTKB188PM00	CCD PWB Unit	—
RAMP-0035TAN0	HEAD AMP PWB Unit	—

Ref. No.	Part No.	★	Description	Code
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DUNTKB187QA00(VL-NZ100U/C)
DUNTKB187QA01(VL-NZ50U/C)
DUNTKB187QA02(VL-NZ100K)
DUNTKB187QA03(VL-NZ150U)
MAIN PWB UNIT

INTEGRATED CIRCUITS

IC151	VHiADS933Y/-1	ADS933Y, 10 Bit A/D Converter	AR
IC201	RH-iXA166WJZZQ	IXA166WJ, Codec External Memory	AW
IC202	RH-iX0850TAZZQ	IX0850TA, Digital Signal Process	BC
IC405	VHiNJU7015R-1Y	NJU7015R, DC Amp	AF
IC407	RH-iXA166WJZZQ	IXA166WJ, Codec External Memory	AW
IC408	RH-iXA166WJZZQ	IXA166WJ, ECC External Memory	AW
IC452	RH-iX0809TAZZ	IX0809TA, Codec/ECC/PCM/CLK. Gen/DIF	BM
IC701	RH-iXA180WJPZQ	IXA180WJ, Mec/System Micon	AY
IC703	RH-iX0940TAZZY	IX0940TA, Character Generator	AL
IC704	VHiS817B28C-1Y	S817B28C, Sys_2.8V_Reg	AD
IC705	VHiBR24C32F-1Y	BR24C32F, E ² PROM	AH
IC706	VHiNJM2143R-1	NJM2143R	AE
IC707	VHiRS5C313/-1	RS5C313, Timer	AL
IC708	VHiS80937AN-1	S80937AN, Reset	AD
IC900	VHiMB3881++-1	MB3881++, Power_CTL	AT
IC901	VHiNJM2143R-1	NJM2143R, 2.8V/2.5V Reg	AE
IC1401	VHiMM1510XN-1	MM1510XN	AE
IC1431	VHiMM1503XN-1Y	MM1503XN	AE
IC1602	VHiPCM3008+-1Y	PCM3008+, 16 Bit ADC/DAC	AN
IC1701	VHiLB11990W-1	LB11990W, Motor Driver	AR
IC1901	VHiLV4051AT-1	LV4051AT, Power Check	AE
IC1902	VHiTA75S01F-1	TA75S01F	AD
IC2800	VHiMM1323XV-1	MM1323XV, LCD Interface	AN
IC2802	VHiTA75S01F-1	TA75S01F, I DET	AD
IC2901	VHiMM1332E/-1	MM1332E	AH
IC3401	VHiBH7277KV-1	BH7277KV, EQ/PLL IC	AX
IC3402	VHiTLC2940/-1	TLC2940, VCO IC	AM
IC3403	VHiTCSZ04U/-1	TCSZ04U, Inv IC	AE
IC3404	VHiADC08351-1	ADC08351, A/D Conv IC	AN
IC3405	VHiSN2G53CT-1	SN2G53CT, SW IC	AE
IC3701	RH-iXA181WJPZQ	IXA181WJ, Camera/Card Micro Computer (NZ100U/C/K/NZ150U)	AZ
IC3701	RH-iXA184WJPZQ	IXA184WJ, Camera/Card Micro Computer(NZ50U/C)	AZ
IC3702	RH-iXA166WJZZQ	IXA166WJ, ECC External Memory (NZ100U/C/K/NZ150U)	AW
IC4401	RH-iXA149WJZZQ	IXA149WJ, Digital ADC/DAC Decoder/Encoder	BB
IC4461	VHiSN2G53CT-1	SN2G53CT, VCTL SW	AE
IC4701	VHiPT8214++-1Y	PT8214++, D/A Converter	AM
IC5701	RH-iX0947TAZZQ	IX0947TA (NZ100U/C/K/NZ150U)	AY

TRANSISTORS

Q701	VSRT1N144U/-1	RT1N144U	AB
Q702	VSKTA2014EY-1Y	KTA2014EY	AB
Q704	VSKTA2014EY-1Y	KTA2014EY	AB
Q705	VSKTA2014EY-1Y	KTA2014EY	AB
Q900	VSCPH6702++-1	CPH6702++	AD
Q901	VS2SC4213B/-1	2SC4213B	AC
Q902	VSFMMT717/-1	FMMT717	AE
Q903	VSCPH6702++-1	CPH6702++	AD
Q904	VSCPH6702++-1	CPH6702++	AD
Q905	VSFMMT619/-1	FMMT619	AE
Q906	VSCPH6702++-1	CPH6702++	AD
Q907	VSCPH6702++-1	CPH6702++	AD

VL-NZ50U/NZ100U
VL-NZ150U

Ref. No.	Part No.	★	Description	Code	Ref. No.	Part No.	★	Description	Code
Q908	VSCPH6702++-1		CPH6702++	AD	X401	RCRSC0160TAZZ		Crystal, CRSC0160TA	AH
Q910	VSND5355AN/-1		NDS355AN	AE	X701	RCRSC0032TAZZ		Crystal, CRSC0032TA	AG
Q911	VSCPH6702++-1		CPH6702++	AD	X702	RCRSC0183TAZZ		Crystal, CRSC0183TA	AH
Q1200	VSKRX203U++-1Y		KRX203U++	AB	X4451	RCRSC0167TAZZ		Crystal, CRSC0167TA	AM
Q1402	VS2SC5376B+-1Y		2SC5376B+ (NZ100U/C/K/NZ150U)	AC	X5701	RCRSCA019WJZZY		Crystal, CRSCA019WJ (NZ100U/C/K/NZ150U)	AG
Q1403	VSKRX203U++-1Y		KRX203U++ (NZ100U/C/K/NZ150U)	AB	COILS AND TRANSFORMER				
Q1431	VSRN4986///-1		RN4986	AB	FL403	RFILC0164TAZZ		Filter, FiLC0164TA	AH
Q1434	VSKTX101UY+-1Y		KTX101UY+	AB	FL3401	RCiLF0408TAZZ		Coil, CiLF0408TA	AG
Q1450	VSRN4986///-1		RN4986	AB	FL3402	RCiLF0408TAZZ		Coil, CiLF0408TA	AG
Q1451	VSKTX101UY+-1Y		KTX101UY+	AB	FL3403	RCiLF0409TAZZ		Coil, CiLF0409TA	AG
Q1452	VSKTA2014EY-1Y		KTA2014EY	AB	FL3702	RFILZ0003TAZZY		Filter, FiLZ0003TA	AD
Q1453	VSKTC4075EY-1Y		KTC4075EY	AB	FL5701	RCiLF0416TAZZY		Coil, CiLF0416TA (NZ100U/C/K/NZ150U)	AE
Q1454	VSKTC4075EY-1Y		KTC4075EY	AB	L151	VPD9M100KR86N		Peaking, 10μH	AC
Q1455	VSKTC4075EY-1Y		KTC4075EY	AB	L403	VPD9M1R0MR20N		Peaking, 1μH	AB
Q1701	VSHN2C01FU/-1		HN2C01FU	AC	L471	VPD9M100J1R7N		Peaking, 10μH	AC
Q1702	VSFMMT619///-1		FMMT619	AE	L701	VPMAN100MR50N		Peaking, 10μH	AC
Q1905	VSND5332P///-1		NDS332P	AD	L900	RCiLP0323TAZZ		Coil, 4.7μH	AD
Q1906	VSKRC404E++-1Y		KRC404E++	AB	L901	RCiLPA010WJZZY		Coil, CiLPA010WJ	AD
Q1908	VSKTA2014EY-1Y		KTA2014EY	AB	L902	VPD9M2R2MR32NY		Peaking, 2.2μH	AB
Q1909	VSKRX203U++-1Y		KRX203U++	AB	L903	VPD9M2R2MR32NY		Peaking, 2.2μH	AB
Q1911	VS2SC4944Y/-1		2SC4944Y	AC	L905	VPD9M4R7MR53NY		Peaking, 4.7μH	AB
Q1913	VSKTC4075EY-1Y		KTC4075EY	AB	L907	RCiLPA010WJZZY		Coil, 15μH	AD
Q1914	VSHN2A01FU/-1		HN2A01FU	AC	L908	VPD9M2R2MR32NY		Peaking, 2.2μH	AB
Q1920	VS3LP01S+++1Y		3LP01S+++	AC	L909	VPD9M4R7MR53NY		Peaking, 4.7μH	AB
Q1921	VSKRX203U++-1Y		KRX203U++	AB	L910	VPD9M2R2MR32NY		Peaking, 2.2μH	AB
Q1932	VSFMMT717///-1		FMMT717	AE	L911	RCiLPA010WJZZY		Coil, 15μH	AD
Q2800	VS3LN01S///-1		3LN01S	AC	L912	VPCCM2R2MR09N		Peaking, 2.2μH	AC
Q2801	VSKTX101UY+-1Y		KTX101UY+	AB	L913	VPMAN100MR50N		Peaking, 10μH	AC
Q2802	VSKTX101UY+-1Y		KTX101UY+	AB	L914	VPMAN100MR50N		Peaking, 10μH	AC
Q2805	VSKTC4075EY-1Y		KTC4075EY	AB	L915	RCiLP0323TAZZ		Coil, 4.7μH	AD
Q2806	VSKTX101UY+-1Y		KTX101UY+	AB	L916	RCiLPA012WJZZY		Coil, 33μH	AD
Q2901	VSFDC642P++-1		FDC642P++	AE	L917	RCiLPA012WJZZY		Coil, 33μH	AD
Q2902	VSFDC642P++-1		FDC642P++	AE	L918	RCiLPA010WJZZY		Coil, 15μH	AD
Q2903	VS2SJ643+++1Y		2SJ643+++	AF	L919	VPCCM2R2MR09N		Peaking, 2.2μH	AC
Q2904	VSKRC854U++-1Y		KRC854U++	AB	L920	VPMAN100MR50N		Peaking, 10μH	AC
Q2905	VSKRC652U++-1Y		KRC652U++	AB	L921	VPMAN100MR50N		Peaking, 10μH	AC
Q2906	VSN04391///-1		XN04391	AC	L923	RCiLPA010WJZZY		Coil, 15μH	AD
Q2907	VSRN4986///-1		RN4986	AB	L1401	VPD9M470K4R1N		Peaking, 47μH	AC
Q3401	VSKTC4075EY-1Y		KTC4075EY	AB	L1431	VPD9M470K4R1N		Peaking, 47μH	AC
Q3404	VSKTC4075EY-1Y		KTC4075EY	AB	L1450	VPD9M470K4R1N		Peaking, 47μH	AC
Q3406	VSNP05534///-1		XP05534	AD	L1451	VPD9M220J2R7N		Peaking, 22μH	AC
Q4432	VSKTA2014EY-1Y		KTA2014EY	AB	L1452	VPD9M180J2R4N		Peaking, 18μH	AC
Q4470	VSRN4986///-1		RN4986	AB	L1601	VPMAN100MR50N		Peaking, 10μH	AC
Q4481	VSKTX101UY+-1Y		KTX101UY+	AB	L1701	VPMAN100MR50N		Peaking, 10μH	AC
Q4482	VSKTX101UY+-1Y		KTX101UY+	AB	L1702	VPD9M4R7MR53NY		Peaking, 4.7μH	AB
Q7401	VSKTC4075EY-1Y		KTC4075EY	AB	L2800	VPD9M470K4R1N		Peaking, 47μH	AC
Q7402	VSKRC404E++-1Y		KRC404E++	AB	L2801	VPD9M470K4R1N		Peaking, 47μH	AC
Q7403	VSKTC4075EY-1Y		KTC4075EY	AB	L2802	VPD9M470K4R1N		Peaking, 47μH	AC
DIODES					L2804	VPCQM4R7MR22NY		Peaking, 4.7μH	AB
D403	VHDHVU362///-1		HVU362	AE	L3401	RCiLP0276TAZZ		Coil, CiLP0276TA	AC
D404	VHDHVU362///-1		HVU362	AE	L3404	VPD9M4R7MR53NY		Peaking, 4.7μH	AB
D471	VHDHVU362///-1		HVU362	AE	L3405	VPD9M4R7MR53NY		Peaking, 4.7μH	AB
D472	VHDHVU359TR-1		HVU359TR	AE	L3701	VPMAN4R7MR37N		Peaking, 4.7μH	AC
D703	VHDKDR732++-1Y		KDR732++	AC	L4404	VPD9M100KR86N		Peaking, 10μH	AC
D900	RH-EX1394CEZZ		Zener Diode, EX1394CE	AB	L4406	VPD9M100KR86N		Peaking, 10μH	AC
D901	VHDM4S159/-1		MA4S159	AC	L4451	RCiLP0353TAZZY		Coil, CiLP0353TA	AC
D902	VHDM4S159/-1		MA4S159	AC	L4471	VPD9M470K4R1N		Peaking, 47μH	AC
D1900	VHDM4132WK/-1		MA132WK	AA	L7400	VPMAN100MR50N		Peaking, 10μH	AC
D2901	RH-EX1400CEZZ		Zener Diode, EX1400CE	AB	L7800	VPD9M100KR86N		Peaking, 10μH	AC
D2902	VHD1SS400++-1Y		1SS400++	AB	L7810	VPD9M180J2R4N		Peaking, 18μH	AC
D2903	VHDSFPE64++-1Y		SFPE64++	AD	△ T900	RTRNZ0152TAZZ		Power Transformer	AF
D2904	VHDF1J2H///-1		F1J2H	AD	CAPACITORS				
D2905	VHDBAS316///-1		BAS316	AB	C153	VCSATA0JJ106M	10	6.3V Tantalum	AD
D2906	RH-EX1398CEZZ		Zener Diode, EX1398CE	AB	C154	VCKYCZ1AF104Z	0.1	10V Ceramic	AB
D4451	VHDKV1812K/-1		KV1812K	AD	C155	VCSATA0JJ106M	10	6.3V Tantalum	AD
D4452	VHDKV1812K/-1		KV1812K	AD	C156	VCKYCZ1AF104Z	0.1	10V Ceramic	AB
D7810	VHHDVC359TR-1		HVC359TR	AD	C157	VCKYCZ1AF104Z	0.1	10V Ceramic	AB
VA1402	RH-VXA003WJZZY		Varistor	AC	C158	VCKYCZ1AF104Z	0.1	10V Ceramic	AB
PACKAGED CIRCUITS					C159	VCKYCZ1AF104Z	0.1	10V Ceramic	AB
TH2800	VHHT1103K44-1		Thermistor	AD	C160	VCKYCZ1AF104Z	0.1	10V Ceramic	AB
TH3401	VHHT1682J44-1		Thermistor	AC	C161	VCKYCZ1AF104Z	0.1	10V Ceramic	AB

Ref. No.	Part No.	★	Description	Code	Ref. No.	Part No.	★	Description	Code
C162	VCCCCZ1HH470J	47p	50V Ceramic	AB	C722	VCKYCY1CB104K	0.1	16V Ceramic	AB
C163	VCKYCY1CB103K	0.01	16V Ceramic	AB	C723	VCKYCY1CB104K	0.1	16V Ceramic	AB
C164	VCSATA0JJ106M	10	6.3V Tantalum	AD	C724	VCKYCY1HB102K	1000p	50V Ceramic	AB
C201	VCSATA0JJ106M	10	6.3V Tantalum	AD	C725	VCKYCY1EB682K	6800p	25V Ceramic	AB
C202	VCKYCY1CB103K	0.01	16V Ceramic	AB	C726	VCKYCY1HB102K	1000p	50V Ceramic	AB
C204	VCKYCY1CB103K	0.01	16V Ceramic	AB	C727	VCKYCY1AF104Z	0.1	10V Ceramic	AB
C205	VCSATA0JJ106M	10	6.3V Tantalum	AD	C728	VCKYCY1AF104Z	0.1	10V Ceramic	AB
C206	VCSATA0JJ106M	10	6.3V Tantalum	AD	C729	VCKYCY1AF104Z	0.1	10V Ceramic	AB
C207	VCKYCY1CB103K	0.01	16V Ceramic	AB	C730	VCKYCY1AF104Z	0.1	10V Ceramic	AB
C208	VCKYCY1CB103K	0.01	16V Ceramic	AB	C731	VCKYCY1AF104Z	0.1	10V Ceramic	AB
C211	VCKYCY1CB103K	0.01	16V Ceramic	AB	C732	VCKYCY1AF104Z	0.1	10V Ceramic	AB
C212	VCKYCY1CB103K	0.01	16V Ceramic	AB	C733	VCKYCY1AF104Z	0.1	10V Ceramic	AB
C213	VCKYCY1CB103K	0.01	16V Ceramic	AB	C734	VCKYCY1AF104Z	0.1	10V Ceramic	AB
C214	VCKYCY1CB103K	0.01	16V Ceramic	AB	C735	VCKYCY1CB103K	0.01	16V Ceramic	AB
C215	VCKYCY1CB103K	0.01	16V Ceramic	AB	C737	VCKYCY1EB682K	6800p	25V Ceramic	AB
C217	VCKYCY1CB103K	0.01	16V Ceramic	AB	C738	VCKYCY1CB103K	0.01	16V Ceramic	AB
C218	VCKYCY1CB103K	0.01	16V Ceramic	AB	C901	VCKYCY1AB104K	0.1	10V Ceramic	AB
C220	VCKYCY1HB221K	220p	50V Ceramic	AA	C904	VCKYCY1CB103K	0.01	16V Ceramic	AB
C401	RC-KZ0083TAZZ	2.2	10V Ceramic	AD	C905	VCKYCY1CB103K	0.01	16V Ceramic	AB
C402	RC-KZ0083TAZZ	2.2	10V Ceramic	AD	C906	VCKYCY1EB472K	4700p	25V Ceramic	AB
C403	RC-KZ0083TAZZ	2.2	10V Ceramic	AD	C907	VCKYCY1HB102K	1000p	50V Ceramic	AB
C404	VCSATA1AJ475M	4.7	10V Tantalum	AC	C908	VCKYCY1AB473K	0.047	10V Ceramic	AB
C405	VCKYCY1AB473K	0.047	10V Ceramic	AB	C910	VCKYCY1AB104K	0.1	10V Ceramic	AB
C407	RC-KZ0083TAZZ	2.2	10V Ceramic	AD	C911	VCKYCY1CB104K	0.1	16V Ceramic	AB
C410	VCKYCY1CB103K	0.01	16V Ceramic	AB	C912	VCKYCY1CB104K	0.1	16V Ceramic	AB
C411	VCKYCY1CB103K	0.01	16V Ceramic	AB	C913	VCKYCY1CB103K	0.01	16V Ceramic	AB
C412	VCKYCY1CB103K	0.01	16V Ceramic	AB	C914	VCCCCZ1HH101J	100p	50V Ceramic	AB
C413	VCKYCY1CB103K	0.01	16V Ceramic	AB	C915	VCKYCY1AB224K	0.22	10V Ceramic	AB
C414	VCKYCY1CB103K	0.01	16V Ceramic	AB	C916	VCKYCY1HB102K	1000p	50V Ceramic	AB
C415	VCKYCY1CB103K	0.01	16V Ceramic	AB	C917	VCKYCY1HB221K	220p	50V Ceramic	AA
C417	VCSATA0JJ336M	33	6.3V Tantalum	AD	C918	VCKYCY1HB221K	220p	50V Ceramic	AA
C418	VCCCCZ1HH100D	10p	50V Ceramic	AB	C919	VCKYCY1HB102K	1000p	50V Ceramic	AB
C419	VCCCCZ1HH100D	10p	50V Ceramic	AB	C920	VCKYCY1CB103K	0.01	16V Ceramic	AB
C420	VCKYCY1CB103K	0.01	16V Ceramic	AB	C921	VCKYCY1CB104K	0.1	16V Ceramic	AB
C421	VCKYCY1CB103K	0.01	16V Ceramic	AB	C922	VCKYCY1CB104K	0.1	16V Ceramic	AB
C423	VCKYCY1CB103K	0.01	16V Ceramic	AB	C923	VCKYCY1HB102K	1000p	50V Ceramic	AB
C424	VCKYCY1CB103K	0.01	16V Ceramic	AB	C924	VCKYCY1HB471K	470p	50V Ceramic	AB
C425	VCKYCY1CB103K	0.01	16V Ceramic	AB	C926	VCKYCY1CB223K	0.022	16V Ceramic	AC
C430	VCKYCY1CB103K	0.01	16V Ceramic	AB	C927	VCKYCY1HB471K	470p	50V Ceramic	AB
C432	VCKYCY1CB103K	0.01	16V Ceramic	AB	C928	VCKYCY1CB104K	0.1	16V Ceramic	AB
C435	VCKYCY1CB103K	0.01	16V Ceramic	AB	C930	RC-KZ0070TAZZ	4.7	16V Ceramic	AD
C447	VCKYCY1CB103K	0.01	16V Ceramic	AB	C931	RC-KZ0075TAZZ	2.2	16V Ceramic	AC
C450	RC-KZ0117TAZZ	4.7	6.3V Ceramic	AD	C932	VCKYCY1HB102K	1000p	50V Ceramic	AB
C451	VCKYCY0JB105K	1	6.3V Ceramic	AC	C933	RC-KZ0044TAZZ	4.7	16V Ceramic	AD
C452	VCKYCY1AB104K	0.1	10V Ceramic	AB	C934	RC-KZ0083TAZZ	2.2	10V Ceramic	AD
C456	VCSATA0JJ106M	10	6.3V Tantalum	AD	C936	VCSATA1AJ106M	10	10V Tantalum	AD
C457	VCKYCY1CB103K	0.01	16V Ceramic	AB	C937	RC-KZ0070TAZZ	4.7	16V Ceramic	AD
C460	VCKYCY1CB103K	0.01	16V Ceramic	AB	C938	RC-KZ0074TAZZ	10	6.3V Ceramic	AF
C462	VCKYCY1CB103K	0.01	16V Ceramic	AB	C939	VCKYTV1AB105K	1	10V Ceramic	AD
C463	VCKYCY1CB103K	0.01	16V Ceramic	AB	C941	VCKYCY1CB103K	0.01	16V Ceramic	AB
C465	VCKYCY1CB103K	0.01	16V Ceramic	AB	C943	VCKYCY1HB102K	1000p	50V Ceramic	AB
C473	VCKYCY1AB104K	0.1	10V Ceramic	AB	C946	VCKYTV1AB105K	1	10V Ceramic	AD
C474	VCKYCY1AB104K	0.1	10V Ceramic	AB	C948	VCSATA0JJ106M	10	6.3V Tantalum	AD
C475	VCKYCY1HB221K	220p	50V Ceramic	AA	C949	VCKYTV1AB105K	1	10V Ceramic	AD
C476	VCKYCY1HB221K	220p	50V Ceramic	AA	C951	VCKYTV1AB105K	1	10V Ceramic	AD
C477	VCKYCY1HB221K	220p	50V Ceramic	AA	C952	RC-KZ0083TAZZ	2.2	10V Ceramic	AD
C478	VCKYCY1HB221K	220p	50V Ceramic	AA	C953	VCKYCY1HB102K	1000p	50V Ceramic	AB
C701	RC-KZ1025CEZZ	1	10V Ceramic	AB	C954	VCKYCY1HB102K	1000p	50V Ceramic	AB
C702	VCKYCY0JF105Z	1	6.3V Ceramic	AB	C955	RC-KZ0075TAZZ	2.2	16V Ceramic	AC
C703	VCKYCY1CB103K	0.01	16V Ceramic	AB	C956	RC-KZ0044TAZZ	4.7	10V Ceramic	AD
C704	VCKYTV1AB105K	1	10V Ceramic	AD	C957	VCKYTV1AB105K	1	10V Ceramic	AD
C705	VCKYCY1CB103K	0.01	16V Ceramic	AB	C959	VCKYTV1EB104K	0.1	25V Ceramic	AB
C706	VCSATA0JJ106M	10	6.3V Tantalum	AD	C960	RC-KZ0070TAZZ	4.7	16V Ceramic	AD
C709	VCKYCY1HB102K	1000p	50V Ceramic	AB	C962	RC-KZ0084TAZZ	1	25V Ceramic	AC
C711	VCKYCY1HB102K	1000p	50V Ceramic	AB	C963	RC-KZ0084TAZZ	1	25V Ceramic	AC
C712	VCKYTV1AB105K	1	10V Ceramic	AD	C964	VCKYTV1CF105Z	1	16V Ceramic	AB
C713	VCKYCY1HB102K	1000p	50V Ceramic	AB	C965	VCKYTV1EB104K	0.1	25V Ceramic	AB
C714	VCCCCZ1HH120J	12p	50V Ceramic	AB	C966	VCKYCY1HB102K	1000p	50V Ceramic	AB
C715	VCCCCZ1HH120J	12p	50V Ceramic	AB	C967	VCKYTV1AB105K	1	10V Ceramic	AD
C716	VCKYCY1HB102K	1000p	50V Ceramic	AB	C968	RC-KZ0084TAZZ	1	25V Ceramic	AC
C717	VCKYCY1CB103K	0.01	16V Ceramic	AB	C969	VCKYTV1CF105Z	1	16V Ceramic	AB
C718	VCKYCY1HB102K	1000p	50V Ceramic	AB	C970	VCKYCY1HB102K	1000p	50V Ceramic	AB
C719	VCCCCZ1HH270J	27p	50V Ceramic	AB	C971	VCKYCY1HB102K	1000p	50V Ceramic	AB
C720	VCCCCZ1HH270J	27p	50V Ceramic	AB	C972	RC-KZ0070TAZZ	4.7	16V Ceramic	AD
C721	VCKYCY1CB103K	0.01	16V Ceramic	AB	C973	RC-KZ0044TAZZ	4.7	10V Ceramic	AD

VL-NZ50U/NZ100U
VL-NZ150U

Ref. No.	Part No.	★	Description	Code	Ref. No.	Part No.	★	Description	Code
C974	RC-KZ0044TAZZ	4.7	10V Ceramic	AD	C2801	VCKYCZ1HF103Z	0.01	50V Ceramic	AB
C980	VCKYCZ1HB102K	1000p	50V Ceramic	AB	C2802	VCKYCZ1HF103Z	0.01	50V Ceramic	AB
C982	RC-KZ0044TAZZ	4.7	10V Ceramic	AD	C2803	VCKYTV1EB104K	0.1	25V Ceramic	AB
C983	VCKYTV1AB105K	1	10V Ceramic	AD	C2804	VCKYTV1AB105K	1	10V Ceramic	AD
C990	RC-KZ0075TAZZ	2.2	16V Ceramic	AC	C2805	VCSATA1AJ106M	10	10V Tantalum	AC
C991	RC-KZ0044TAZZ	4.7	10V Ceramic	AD	C2806	VCSATA1VJ155M	1.5	35V Tantalum	AC
C992	VCKYCZ1HB102K	1000p	50V Ceramic	AB	C2807	VCKYCZ1CB103K	0.01	16V Ceramic	AB
C993	VCKYCY1AB224K	0.22	10V Ceramic	AB	C2809	VCKYTV1AB105K	1	10V Ceramic	AD
C1201	VCCCCZ1HH151J	150p	50V Ceramic	AB	C2810	VCKYTV1AB105K	1	10V Ceramic	AD
C1401	VCSATE1AJ226M	22	10V Tantalum	AD	C2811	VCKYTV1AB105K	1	10V Ceramic	AD
C1403	VCKYCY0JF105Z	1	6.3V Ceramic	AB	C2812	VCKYTV1AB105K	1	10V Ceramic	AD
C1404	VCKYCZ1CB103K	0.01	16V Ceramic	AB	C2813	VCKYTV1CB105K	1	16V Ceramic	AC
C1405	VCSATE0JJ107M	100	6.3V Tantalum	AE	C2815	VCKYTV1CB105K	1	16V Ceramic	AC
C1406	VCSATA0JJ156M	15	6.3V Tantalum	AC	C2819	VCKYCZ1AF104Z	0.1	10V Ceramic	AB
C1431	VCSATE1AJ226M	22	10V Tantalum	AD	C2821	VCKYCZ1AB104K	0.1	10V Ceramic	AB
C1436	VCCCCZ1HH150J	15p	50V Ceramic	AB	C2822	VCKYCY0JB105K	1	6.3V Ceramic	AC
		(NZ100U/C/K/NZ150U)			C2823	VCCCCZ1HH330J	33p	50V Ceramic	AB
C1437	VCCCCZ1HH680J	68p	50V Ceramic	AB	C2825	VCKYCY1EB104KY	0.1	25V Ceramic	AB
		(NZ100U/C/K/NZ150U)			C2828	VCKYCY0JB105K	1	6.3V Ceramic	AC
C1438	VCKYCZ1AF104Z	0.1	10V Ceramic	AB	C2830	VCKYCZ1CB103K	0.01	16V Ceramic	AB
C1439	VCKYCY0JF105Z	1	6.3V Ceramic	AB	C2831	VCKYCZ1CB103K	0.01	16V Ceramic	AB
		(NZ100U/C/K/NZ150U)			C2901	VCKYCY1CB104K	0.1	16V Ceramic	AB
C1440	VCKYCZ1CB103K	0.01	16V Ceramic	AB	C2902	VCKYTV1CF105Z	1	16V Ceramic	AB
C1450	VCCCCZ1HH270J	27p	50V Ceramic	AB	C2903	VCKYCY1CB104K	0.1	16V Ceramic	AB
C1451	VCCCCZ1HH560J	56p	50V Ceramic	AB	C3401	VCCCCZ1HH390J	39p	50V Ceramic	AB
C1452	VCCCCZ1HH470J	47p	50V Ceramic	AB	C3402	VCCCCZ1HH100D	10p	50V Ceramic	AB
C1453	VCCCCZ1HH7R0D	7p	50V Ceramic	AB	C3403	VCCCCZ1HH100D	10p	50V Ceramic	AB
C1454	VCCCCZ1HH470J	47p	50V Ceramic	AB	C3405	VCCCCZ1HH820J	82p	50V Ceramic	AB
C1455	VCSATA1AJ106M	10	10V Tantalum	AC	C3406	VCKYCY0JB105K	1	6.3V Ceramic	AC
C1457	VCKYCZ1CB103K	0.01	16V Ceramic	AB	C3408	VCKYCZ1AF104Z	0.1	10V Ceramic	AB
C1458	VCSATE1AJ476M	47	10V Tantalum	AD	C3409	VCKYCZ1HB471K	470p	50V Ceramic	AB
C1603	VCKYCY0JB105K	1	6.3V Ceramic	AC	C3410	VCKYCZ1AF104Z	0.1	10V Ceramic	AB
C1604	VCKYCY0JB105K	1	6.3V Ceramic	AC	C3411	VCKYCZ1HB471K	470p	50V Ceramic	AB
C1605	RC-KZ0083TAZZ	2.2	10V Ceramic	AD	C3412	VCKYCZ1AF104Z	0.1	10V Ceramic	AB
C1608	VCSATA0JJ106M	10	6.3V Tantalum	AD	C3413	VCKYCZ1AF104Z	0.1	10V Ceramic	AB
C1610	VCKYCZ1AF104Z	0.1	10V Ceramic	AB	C3414	VCKYCZ1AF104Z	0.1	10V Ceramic	AB
C1611	VCKYCY1AB474K	0.47	10V Ceramic	AC	C3415	VCKYCZ1AF104Z	0.1	10V Ceramic	AB
C1617	VCKYCY1AB474K	0.47	10V Ceramic	AC	C3416	VCKYCZ1AF104Z	0.1	10V Ceramic	AB
C1701	VCKYCZ1CB223K	0.022	16V Ceramic	AC	C3417	VCKYCZ1AF104Z	0.1	10V Ceramic	AB
C1702	VCKYCZ1CB223K	0.022	16V Ceramic	AC	C3418	VCKYCZ1AF104Z	0.1	10V Ceramic	AB
C1703	VCKYTV1AB105K	1	10V Ceramic	AD	C3419	VCKYCZ1AF104Z	0.1	10V Ceramic	AB
C1704	RC-KZ1025CEZZ	1	10V Ceramic	AB	C3420	VCCCCZ1HH100D	10p	50V Ceramic	AB
C1705	VCKYCZ1AB104K	0.1	10V Ceramic	AB	C3421	VCCCCZ1HH121J	120p	50V Ceramic	AB
C1706	VCKYCZ1AF104Z	0.1	10V Ceramic	AB	C3423	VCCCCZ1HH121J	120p	50V Ceramic	AB
C1707	VCKYCZ1AF104Z	0.1	10V Ceramic	AB	C3424	VCKYCZ1CB103K	0.01	16V Ceramic	AB
C1708	RC-KZ0083TAZZ	2.2	10V Ceramic	AD	C3426	VCKYCZ1CB103K	0.01	16V Ceramic	AB
C1709	VCKYCZ1AF104Z	0.1	10V Ceramic	AB	C3428	VCKYCY0JB105K	1	6.3V Ceramic	AC
C1710	VCKYCZ1AF104Z	0.1	10V Ceramic	AB	C3429	VCKYCZ1HB102K	1000p	50V Ceramic	AB
C1711	VCKYTV1AB105K	1	10V Ceramic	AD	C3430	VCKYCZ1AF104Z	0.1	10V Ceramic	AB
C1712	VCKYCZ1AF104Z	0.1	10V Ceramic	AB	C3431	VCKYCZ1CB103K	0.01	16V Ceramic	AB
C1713	VCKYCZ1HB102K	1000p	50V Ceramic	AB	C3432	VCKYCZ1AF104Z	0.1	10V Ceramic	AB
C1714	VCKYCZ1AF104Z	0.1	10V Ceramic	AB	C3433	VCKYCZ1CB103K	0.01	16V Ceramic	AB
C1715	VCKYCZ1HB102K	1000p	50V Ceramic	AB	C3434	VCKYCZ1CB103K	0.01	16V Ceramic	AB
C1716	VCKYCZ1HB102K	1000p	50V Ceramic	AB	C3436	VCSATA0JJ336M	33	6.3V Tantalum	AD
C1717	VCKYCZ1AF104Z	0.1	10V Ceramic	AB	C3442	VCCCCZ1HH180J	18p	50V Ceramic	AB
C1718	VCKYCZ1AF104Z	0.1	10V Ceramic	AB	C3443	VCCCCZ1HH220J	22p	50V Ceramic	AB
C1719	VCKYCY0JF105Z	1	6.3V Ceramic	AB	C3444	VCKYCZ1AF104Z	0.1	10V Ceramic	AB
C1720	VCKYCZ1AF104Z	0.1	10V Ceramic	AB	C3452	VCKYCZ1CB103K	0.01	16V Ceramic	AB
C1721	VCKYCY0JF105Z	1	6.3V Ceramic	AB	C3454	VCKYCY0JB105K	1	6.3V Ceramic	AC
C1722	VCKYCY1CB473K	0.047	16V Ceramic	AA	C3455	VCKYCZ1CB103K	0.01	16V Ceramic	AB
C1723	VCKYCZ1EB472K	4700p	25V Ceramic	AB	C3456	VCSATA0JJ106M	10	6.3V Tantalum	AD
C1724	RC-KZ1025CEZZ	1	10V Ceramic	AB	C3457	VCKYCZ1CB103K	0.01	16V Ceramic	AB
C1725	VCKYCZ1AF104Z	0.1	10V Ceramic	AB	C3458	VCKYCZ1AF104Z	0.1	10V Ceramic	AB
C1726	VCKYCZ1AF104Z	0.1	10V Ceramic	AB	C3462	VCKYCZ1CB103K	0.01	16V Ceramic	AB
C1727	VCCCCZ1HH101J	100p	50V Ceramic	AB	C3467	VCKYCZ1CB103K	0.01	16V Ceramic	AB
C1728	RC-KZ1025CEZZ	1	10V Ceramic	AB	C3471	VCKYCZ1AF104Z	0.1	10V Ceramic	AB
C1729	VCKYCZ1AF104Z	0.1	10V Ceramic	AB	C3473	VCSATA0JJ336M	33	6.3V Tantalum	AD
C1730	VCKYTV1AB105K	1	10V Ceramic	AD	C3474	VCKYCZ1CB103K	0.01	16V Ceramic	AB
C1906	VCKYCZ1AB104K	0.1	10V Ceramic	AB	C3475	VCKYCZ1AF104Z	0.1	10V Ceramic	AB
C1911	VCKYTV1EB104K	0.1	25V Ceramic	AB	C3476	VCKYCZ1AF104Z	0.1	10V Ceramic	AB
C1921	VCSATA1CJ106M	10	16V Tantalum	AD	C3477	VCKYCZ1AF104Z	0.1	10V Ceramic	AB
C1922	VCKYTV1EB104K	0.1	25V Ceramic	AB	C3479	VCKYCZ1AF104Z	0.1	10V Ceramic	AB
C1980	VCKYCZ1AB104K	0.1	10V Ceramic	AB	C3481	VCCCCZ1HH100D	10p	50V Ceramic	AB
C1982	VCKYTV1EB104K	0.1	25V Ceramic	AB	C3701	VCKYTV1AB105K	1	10V Ceramic	AD
C2800	VCKYCY0JF105Z	1	6.3V Ceramic	AB	C3702	VCKYCZ1AF104Z	0.1	10V Ceramic	AB

Ref. No.	Part No.	★	Description	Code	Ref. No.	Part No.	★	Description	Code
C3703	VCKYCZ1AF104Z	0.1	10V Ceramic	AB	C7801	VCKYCZ1AF104Z	0.1	10V Ceramic	AB
C3704	VCKYCZ1HB102K	1000p	50V Ceramic	AB	C7802	VCKYCY0JB105K	1	6.3V Ceramic	AC
C3705	VCKYCZ1AF104Z	0.1	10V Ceramic	AB	C7803	VCKYCZ1AF104Z	0.1	10V Ceramic	AB
C3706	VCKYCZ1AF104Z	0.1	10V Ceramic	AB	C7804	VCKYCY0JB105K	1	6.3V Ceramic	AC
C3708	VCSATA0JJ106M	10	6.3V Tantalum	AD	C7805	VCKYCZ1AF104Z	0.1	10V Ceramic	AB
			(NZ100U/C/K/NZ150U)		C7806	VCKYCY0JB105K	1	6.3V Ceramic	AC
C3709	VCKYCZ1CB103K	0.01	16V Ceramic	AB	C7807	VCKYCZ1CB103K	0.01	16V Ceramic	AB
			(NZ100U/C/K/NZ150U)		C7808	VCKYCZ1CB103K	0.01	16V Ceramic	AB
C3710	VCKYCZ1CB103K	0.01	16V Ceramic	AB	C7809	VCKYCZ1CB103K	0.01	16V Ceramic	AB
			(NZ100U/C/K/NZ150U)		C7810	VCCCCZ1HH470J	47p	50V Ceramic	AB
C3711	VCKYCZ1CB103K	0.01	16V Ceramic	AB	C7811	VCKYCZ1HB102K	1000p	50V Ceramic	AB
C4401	RC-KZ0083TAZZ	2.2	10V Ceramic	AD	C7812	VCCCCZ1HH221J	220p	50V Ceramic	AB
C4402	RC-KZ0083TAZZ	2.2	10V Ceramic	AD	C7813	VCKYCZ1CB103K	0.01	16V Ceramic	AB
C4403	RC-KZ0083TAZZ	2.2	10V Ceramic	AD	C7814	VCKYCZ1CB103K	0.01	16V Ceramic	AB
C4404	VCSATA0JJ106M	10	6.3V Tantalum	AD	C7815	VCKYCZ1CB103K	0.01	16V Ceramic	AB
C4405	RC-KZ0083TAZZ	2.2	10V Ceramic	AD	C7816	VCKYCZ1CB103K	0.01	16V Ceramic	AB
C4406	VCSATA0JJ106M	10	6.3V Tantalum	AD	C7817	VCKYCZ1CB103K	0.01	16V Ceramic	AB
C4407	VCKYCY1AB224K	0.22	10V Ceramic	AB	C7818	VCKYCY1AB224K	0.22	10V Ceramic	AB
C4408	VCKYCY1AB224K	0.22	10V Ceramic	AB	C7820	VCKYTV1AB105K	1	10V Ceramic	AD
C4409	VCKYCY1AB224K	0.22	10V Ceramic	AB	C7821	VCKYCZ1HB102K	1000p	50V Ceramic	AB
C4410	VCKYCZ1AB104K	0.1	10V Ceramic	AB	C7822	VCKYCZ1CB103K	0.01	16V Ceramic	AB
C4413	VCKYCZ1AB104K	0.1	10V Ceramic	AB					
C4414	VCKYCZ1AF104Z	0.1	10V Ceramic	AB					
C4415	VCKYCZ1AF104Z	0.1	10V Ceramic	AB					
C4416	VCKYCZ1CB103K	0.01	16V Ceramic	AB					
C4417	VCCCCZ1HH221J	220p	50V Ceramic	AB					
C4418	VCCCCZ1HH221J	220p	50V Ceramic	AB					
C4419	VCKYCZ1CB103K	0.01	16V Ceramic	AB					
C4420	VCKYCZ1CB103K	0.01	16V Ceramic	AB					
C4421	VCKYCZ1CB103K	0.01	16V Ceramic	AB					
C4422	VCKYCZ1CB103K	0.01	16V Ceramic	AB					
C4423	VCKYCZ1CB103K	0.01	16V Ceramic	AB					
C4424	VCKYCZ1CB103K	0.01	16V Ceramic	AB					
C4426	VCKYCZ1CB103K	0.01	16V Ceramic	AB					
C4427	VCKYCZ1CB103K	0.01	16V Ceramic	AB					
C4428	VCKYCZ1CB103K	0.01	16V Ceramic	AB					
C4435	VCSATA1AJ106M	10	10V Tantalum	AC					
C4436	VCKYCZ1CB103K	0.01	16V Ceramic	AB					
C4451	VCCCCZ1HH330J	33p	50V Ceramic	AB					
C4454	VCCCCZ1HH330J	33p	50V Ceramic	AB					
C4461	RC-KZ0083TAZZ	2.2	10V Ceramic	AD					
C4462	VCKYCZ1AB104K	0.1	10V Ceramic	AB					
C4463	VCKYCZ1EB682K	6800p	25V Ceramic	AB					
C4466	VCKYCZ1CB103K	0.01	16V Ceramic	AB					
C4481	VCSATN0JJ106M	10	6.3V Tantalum	AD					
C4482	VCKYCZ1CB103K	0.01	16V Ceramic	AB					
C4483	VCSATA1AJ475M	4.7	10V Tantalum	AC					
C4485	VCKYCZ1AF104Z	0.1	10V Ceramic	AB					
C4701	VCKYCZ1AF104Z	0.1	10V Ceramic	AB					
C4702	VCKYCZ1AF104Z	0.1	10V Ceramic	AB					
C5701	VCSATA0JJ106M	10	6.3V Tantalum	AD					
			(NZ100U/C/K/NZ150U)						
C5702	VCKYCZ1AF104Z	0.1	10V Ceramic	AB					
			(NZ100U/C/K/NZ150U)						
C5703	VCKYCZ1HB102K	1000p	50V Ceramic	AB					
			(NZ100U/C/K/NZ150U)						
C5704	VCKYCZ1HB102K	1000p	50V Ceramic	AB					
			(NZ100U/C/K/NZ150U)						
C5705	VCKYCZ1AF104Z	0.1	10V Ceramic	AB					
			(NZ100U/C/K/NZ150U)						
C5706	VCKYCZ1AF104Z	0.1	10V Ceramic	AB					
			(NZ100U/C/K/NZ150U)						
C5707	VCCCCZ1HH100D	10p	50V Ceramic	AB					
			(NZ100U/C/K/NZ150U)						
C5708	VCCCCZ1HH100D	10p	50V Ceramic	AB					
			(NZ100U/C/K/NZ150U)						
C7400	RC-KZ0083TAZZ	2.2	10V Ceramic	AD					
C7401	RC-KZ0083TAZZ	2.2	10V Ceramic	AD					
C7402	VCKYCZ1CB103K	0.01	16V Ceramic	AB					
C7403	VCKYCZ1CB103K	0.01	16V Ceramic	AB					
C7404	VCKYCZ1EB472K	4700p	25V Ceramic	AB					
C7413	VCKYCZ1HB221K	220p	50V Ceramic	AA					
C7414	VCCCCZ1HH330J	33p	50V Ceramic	AB					
C7417	VCKYCY0JB105K	1	6.3V Ceramic	AC					
C7800	VCSATA0JJ106M	10	6.3V Tantalum	AD					

RESISTORS

R152	VRS-CZ1JF000J	0	1/16W Metal Oxide	AA
R153	VRS-CZ1JF102J	1k	1/16W Metal Oxide	AA
R154	VRS-CZ1JF221J	220	1/16W Metal Oxide	AA
R155	VRS-CZ1JF000J	0	1/16W Metal Oxide	AA
R219	VRS-CZ1JF222J	2.2k	1/16W Metal Oxide	AA
R245	VRS-CZ1JF000J	0	1/16W Metal Oxide	AA
R246	VRS-CZ1JF000J	0	1/16W Metal Oxide	AA
R401	VRS-CZ1JF000J	0	1/16W Metal Oxide	AA
R402	VRS-CZ1JF000J	0	1/16W Metal Oxide	AA
R403	VRS-CZ1JF000J	0	1/16W Metal Oxide	AA
R404	VRS-CZ1JF102J	1k	1/16W Metal Oxide	AA
R406	VRS-CZ1JF101J	100	1/16W Metal Oxide	AA
R407	VRS-CZ1JF153J	15k	1/16W Metal Oxide	AA
R409	VRS-CZ1JF103J	10k	1/16W Metal Oxide	AA
R410	VRS-CZ1JF103J	10k	1/16W Metal Oxide	AA
R411	VRS-CZ1JF154J	150k	1/16W Metal Oxide	AA
R412	VRS-CZ1JF334J	330k	1/16W Metal Oxide	AA
R413	VRS-CZ1JF000J	0	1/16W Metal Oxide	AA
R414	VRS-CZ1JF000J	0	1/16W Metal Oxide	AA
R415	VRS-CZ1JF000J	0	1/16W Metal Oxide	AA
R416	VRS-CZ1JF823J	82k	1/16W Metal Oxide	AA
R418	VRS-CZ1JF101J	100	1/16W Metal Oxide	AA
R428	VRS-CZ1JF000J	0	1/16W Metal Oxide	AA
R431	VRS-CZ1JF000J	0	1/16W Metal Oxide	AA
R432	VRS-CZ1JF000J	0	1/16W Metal Oxide	AA
R436	VRS-CZ1JF224J	220k	1/16W Metal Oxide	AA
R437	VRS-CZ1JF224J	220k	1/16W Metal Oxide	AA
R438	VRS-CZ1JF000J	0	1/16W Metal Oxide	AA
R440	VRS-CZ1JF393J	39k	1/16W Metal Oxide	AA
R441	VRS-CZ1JF563J	56k	1/16W Metal Oxide	AA
R442	VRS-CZ1JF114J	110k	1/16W Metal Oxide	AB
R443	VRS-CZ1JF105J	1M	1/16W Metal Oxide	AA
R446	VRS-CZ1JF000J	0	1/16W Metal Oxide	AA
R462	VRS-CZ1JF103J	10k	1/16W Metal Oxide	AA
R463	VRS-CZ1JF103J	10k	1/16W Metal Oxide	AA
R467	VRS-CZ1JF000J	0	1/16W Metal Oxide	AA
R468	VRS-CZ1JF000J	0	1/16W Metal Oxide	AA
R471	VRS-CZ1JF472J	4.7k	1/16W Metal Oxide	AA
R477	VRS-CZ1JF823J	82k	1/16W Metal Oxide	AA
R478	VRS-CZ1JF823J	82k	1/16W Metal Oxide	AA
R701	VRS-CZ1JF152J	1.5k	1/16W Metal Oxide	AA
R702	VRS-CZ1JF102J	1k	1/16W Metal Oxide	AA
R703	VRS-CZ1JF562J	5.6k	1/16W Metal Oxide	AA
R704	VRS-CZ1JF273J	27k	1/16W Metal Oxide	AA
R705	VRS-CZ1JF104J	100k	1/16W Metal Oxide	AA
R706	VRS-CZ1JF102J	1k	1/16W Metal Oxide	AA
R707	VRS-CZ1JF272J	2.7k	1/16W Metal Oxide	AA
R708	VRS-CZ1JF102J	1k	1/16W Metal Oxide	AA
R709	VRS-CZ1JF104J	100k	1/16W Metal Oxide	AA
R710	VRS-CZ1JF102J	1k	1/16W Metal Oxide	AA
R711	VRS-CZ1JF103J	10k	1/16W Metal Oxide	AA
R712	VRS-CZ1JF103J	10k	1/16W Metal Oxide	AA

Ref. No.	Part No.	★	Description	Code	Ref. No.	Part No.	★	Description	Code
R713	VRS-CZ1JF101J	100	1/16W Metal Oxide	AA	R927	VRS-CZ1JF683D	68k	1/16W Metal Oxide	AB
R714	VRS-CZ1JF104J	100k	1/16W Metal Oxide	AA	R928	VRS-CZ1JF103J	10k	1/16W Metal Oxide	AA
R716	VRS-CZ1JF272J	2.7k	1/16W Metal Oxide	AA	R929	VRS-CZ1JF823D	82k	1/16W Metal Oxide	AB
R717	VRS-CZ1JF102J	1k	1/16W Metal Oxide	AA	R930	VRS-CZ1JF333J	33k	1/16W Metal Oxide	AA
R718	VRS-CZ1JF102J	1k	1/16W Metal Oxide	AA	R931	VRS-CZ1JF104J	100k	1/16W Metal Oxide	AA
R719	VRS-CZ1JF101J	100	1/16W Metal Oxide	AA	R933	VRS-CZ1JF683J	68k	1/16W Metal Oxide	AA
R720	VRS-CZ1JF103J	10k	1/16W Metal Oxide	AA	R934	VRS-CZ1JF153J	15k	1/16W Metal Oxide	AA
R722	VRS-CZ1JF104J	100k	1/16W Metal Oxide	AA	R935	VRS-CZ1JF183J	18k	1/16W Metal Oxide	AA
R723	VRS-CZ1JF103J	10k	1/16W Metal Oxide	AA	R936	VRS-CZ1JF333J	33k	1/16W Metal Oxide	AA
R724	VRS-CZ1JF823D	82k	1/16W Metal Oxide	AB	R937	VRS-CZ1JF333J	33k	1/16W Metal Oxide	AA
R725	VRS-CZ1JF102J	1k	1/16W Metal Oxide	AA	R938	VRS-CZ1JF105J	1M	1/16W Metal Oxide	AA
R726	VRS-CZ1JF000J	0	1/16W Metal Oxide	AA	R939	VRS-CZ1JF103J	10k	1/16W Metal Oxide	AA
R727	VRS-CZ1JF106J	10M	1/16W Metal Oxide	AA	R940	VRS-CZ1JF153D	15k	1/16W Metal Oxide	AB
R728	VRS-CZ1JF104J	100k	1/16W Metal Oxide	AA	R941	VRS-CZ1JF103D	10k	1/16W Metal Oxide	AB
R729	VRS-CZ1JF332J	3.3k	1/16W Metal Oxide	AA	R942	VRS-CZ1JF105J	1M	1/16W Metal Oxide	AA
R730	VRS-CY1JF103J	10k	1/16W Metal Oxide	AA	R943	VRS-CZ1JF303D	30k	1/16W Metal Oxide	AA
R731	VRS-CZ1JF102J	1k	1/16W Metal Oxide	AA	R946	VRS-CZ1JF163D	16k	1/16W Metal Oxide	AA
R732	VRS-CZ1JF474D	470k	1/16W Metal Oxide	AA	R948	VRS-CZ1JF473D	47k	1/16W Metal Oxide	AB
R733	VRS-CZ1JF104J	100k	1/16W Metal Oxide	AA	R949	VRS-CZ1JF221J	220	1/16W Metal Oxide	AA
R734	VRS-CZ1JF102J	1k	1/16W Metal Oxide	AA	R950	VRS-CZ1JF102J	1k	1/16W Metal Oxide	AA
R735	VRS-CZ1JF332J	3.3k	1/16W Metal Oxide	AA	R951	VRS-CZ1JF102J	1k	1/16W Metal Oxide	AA
R736	VRS-CZ1JF102J	1k	1/16W Metal Oxide	AA	R952	VRS-CZ1JF223D	22k	1/16W Metal Oxide	AB
R737	VRS-CZ1JF332J	3.3k	1/16W Metal Oxide	AA	R954	VRS-CZ1JF333D	33k	1/16W Metal Oxide	AB
R738	VRS-CZ1JF102J	1k	1/16W Metal Oxide	AA	R956	VRS-CZ1JF102J	1k	1/16W Metal Oxide	AA
R739	VRS-CZ1JF103D	10k	1/16W Metal Oxide	AB	R957	VRS-CZ1JF333D	33k	1/16W Metal Oxide	AB
R741	VRS-CZ1JF102J	1k	1/16W Metal Oxide	AA	R959	VRS-CZ1JF153D	15k	1/16W Metal Oxide	AB
R742	VRS-CZ1JF102J	1k	1/16W Metal Oxide	AA	R960	VRS-CZ1JF331J	330	1/16W Metal Oxide	AA
R743	VRS-CZ1JF102J	1k	1/16W Metal Oxide	AA	R962	VRS-CZ1JF105J	1M	1/16W Metal Oxide	AA
R744	VRS-CZ1JF224J	220k	1/16W Metal Oxide	AA	R965	VRS-CZ1JF122D	1.2k	1/16W Metal Oxide	AB
R745	VRS-CZ1JF102J	1k	1/16W Metal Oxide	AA	R966	VRS-CZ1JF000J	0	1/16W Metal Oxide	AA
R746	VRS-CZ1JF000J	0	1/16W Metal Oxide	AA	R968	VRS-CZ1JF222D	2.2k	1/16W Metal Oxide	AA
R747	VRS-CZ1JF683J	68k	1/16W Metal Oxide	AA	R970	VRS-CZ1JF102J	1k	1/16W Metal Oxide	AA
R748	VRS-CZ1JF105J	1M	1/16W Metal Oxide	AA	R972	VRS-CZ1JF133D	13k	1/16W Metal Oxide	AA
R749	VRS-CZ1JF103J	10k	1/16W Metal Oxide	AA	R973	VRS-CZ1JF561J	560	1/16W Metal Oxide	AA
R750	VRS-CZ1JF103J	10k	1/16W Metal Oxide	AA	R974	VRS-CZ1JF102D	1k	1/16W Metal Oxide	AA
R751	VRS-CZ1JF103J	10k	1/16W Metal Oxide	AA	R975	VRS-CZ1JF331J	330	1/16W Metal Oxide	AA
R752	VRS-CZ1JF103J	10k	1/16W Metal Oxide	AA	R977	VRS-CZ1JF103J	10k	1/16W Metal Oxide	AA
R753	VRS-CZ1JF103J	10k	1/16W Metal Oxide	AA	R979	VRS-CZ1JF104D	100k	1/16W Metal Oxide	AB
R754	VRS-CZ1JF103J	10k	1/16W Metal Oxide	AA	R980	VRS-CZ1JF103J	10k	1/16W Metal Oxide	AA
R755	VRS-CZ1JF332J	3.3k	1/16W Metal Oxide	AA	R982	VRS-CZ1JF471J	470	1/16W Metal Oxide	AA
R756	VRS-CZ1JF102J	1k	1/16W Metal Oxide	AA	R983	VRS-CZ1JF471J	470	1/16W Metal Oxide	AA
R759	VRS-CZ1JF224J	220k	1/16W Metal Oxide	AA	R987	VRS-CZ1JF102J	1k	1/16W Metal Oxide	AA
R760	VRS-CZ1JF102J	1k	1/16W Metal Oxide	AA	R988	VRS-CZ1JF102J	1k	1/16W Metal Oxide	AA
R761	VRS-CZ1JF102J	1k	1/16W Metal Oxide	AA	R989	VRS-CZ1JF102J	1k	1/16W Metal Oxide	AA
R762	VRS-CZ1JF102J	1k	1/16W Metal Oxide	AA	R990	VRS-CZ1JF102J	1k	1/16W Metal Oxide	AA
R763	VRS-CZ1JF102J	1k	1/16W Metal Oxide	AA	R995	VRS-CZ1JF102J	1k	1/16W Metal Oxide	AA
R764	VRS-CZ1JF104J	100k	1/16W Metal Oxide	AA	R996	VRS-CZ1JF102J	1k	1/16W Metal Oxide	AA
R765	VRS-CZ1JF104J	100k	1/16W Metal Oxide	AA	R999	VRS-CZ1JF102J	1k	1/16W Metal Oxide	AA
R766	VRS-CZ1JF104J	100k	1/16W Metal Oxide	AA	R1200	VRS-CZ1JF562J	5.6k	1/16W Metal Oxide	AA
R767	VRS-CZ1JF104J	100k	1/16W Metal Oxide	AA	R1402	VRS-CZ1JF103J	10k	1/16W Metal Oxide	AA
R771	VRS-CZ1JF103J	10k	1/16W Metal Oxide	AA				(NZ100U/C/K/NZ150U)	
R772	VRS-CZ1JF474J	470k	1/16W Metal Oxide	AA	R1413	VRS-CZ1JF470J	47	1/16W Metal Oxide	AA
R779	VRS-CZ1JF000J	0	1/16W Metal Oxide	AA	R1414	VRS-CZ1JF270J	27	1/16W Metal Oxide	AA
R780	VRS-CY1JF000J	0	1/16W Metal Oxide	AA	R1438	VRS-CZ1JF122J	1.2k	1/16W Metal Oxide	AA
R782	VRS-CZ1JF104J	100k	1/16W Metal Oxide	AA	R1439	VRS-CZ1JF272J	2.7k	1/16W Metal Oxide	AA
R796	VRS-CZ1JF102J	1k	1/16W Metal Oxide	AA	R1440	VRS-CZ1JF561J	560	1/16W Metal Oxide	AA
R797	VRS-CZ1JF104J	100k	1/16W Metal Oxide	AA	R1441	VRS-CZ1JF561J	560	1/16W Metal Oxide	AA
R902	VRS-CZ1JF472J	4.7k	1/16W Metal Oxide	AA	R1442	VRS-CZ1JF750J	75	1/16W Metal Oxide	AA
R903	VRS-CZ1JF103J	10k	1/16W Metal Oxide	AA	R1450	VRS-CZ1JF681J	680	1/16W Metal Oxide	AA
R904	VRS-CZ1JF123J	12k	1/16W Metal Oxide	AA	R1451	VRS-CZ1JF471J	470	1/16W Metal Oxide	AA
R905	VRS-CZ1JF153J	15k	1/16W Metal Oxide	AA	R1452	VRS-CZ1JF471J	470	1/16W Metal Oxide	AA
R906	VRS-CZ1JF153J	15k	1/16W Metal Oxide	AA	R1453	VRS-CZ1JF101J	100	1/16W Metal Oxide	AA
R907	VRS-CZ1JF822J	8.2k	1/16W Metal Oxide	AA	R1454	VRS-CZ1JF682J	6.8k	1/16W Metal Oxide	AA
R908	VRS-CZ1JF000J	0	1/16W Metal Oxide	AA	R1455	VRS-CZ1JF681J	680	1/16W Metal Oxide	AA
R909	VRS-CZ1JF562D	5.6k	1/16W Metal Oxide	AB	R1456	VRS-CZ1JF391J	390	1/16W Metal Oxide	AA
R910	VRS-CZ1JF272D	2.7k	1/16W Metal Oxide	AB	R1457	VRS-CZ1JF392J	3.9k	1/16W Metal Oxide	AA
R912	VRS-CZ1JF473J	47k	1/16W Metal Oxide	AA	R1458	VRS-CZ1JF821J	820	1/16W Metal Oxide	AA
R913	VRS-CZ1JF000J	0	1/16W Metal Oxide	AA	R1459	VRS-CZ1JF102J	1k	1/16W Metal Oxide	AA
R914	VRS-CZ1JF105J	1M	1/16W Metal Oxide	AA	R1461	VRS-CZ1JF561J	560	1/16W Metal Oxide	AA
R917	VRS-CZ1JF471J	470	1/16W Metal Oxide	AA	R1462	VRS-CZ1JF821J	820	1/16W Metal Oxide	AA
R918	VRS-CZ1JF472D	4.7k	1/16W Metal Oxide	AB	R1463	VRS-CZ1JF821J	820	1/16W Metal Oxide	AA
R919	VRS-CZ1JF103D	10k	1/16W Metal Oxide	AB	R1464	VRS-CZ1JF682J	6.8k	1/16W Metal Oxide	AA
R920	VRS-CZ1JF103J	10k	1/16W Metal Oxide	AA	R1465	VRS-CZ1JF822J	8.2k	1/16W Metal Oxide	AA
R924	VRS-CZ1JF113D	11k	1/16W Metal Oxide	AA	R1466	VRS-CZ1JF000J	0	1/16W Metal Oxide	AA
R926	VRS-CZ1JF333D	33k	1/16W Metal Oxide	AB	R1467	VRS-CZ1JF272J	2.7k	1/16W Metal Oxide	AA

Ref. No.	Part No.	★	Description	Code	Ref. No.	Part No.	★	Description	Code
R1471	VRS-CZ1JF000J	0	1/16W Metal Oxide	AA	R2807	VRS-CZ1JF000J	0	1/16W Metal Oxide	AA
R1480	VRS-CY1JF000J	0	1/16W Metal Oxide	AA	R2811	VRS-CZ1JF102J	1k	1/16W Metal Oxide	AA
R1481	VRS-CY1JF102J	1k	1/16W Metal Oxide	AA	R2812	VRS-CZ1JF000J	0	1/16W Metal Oxide	AA
R1482	VRS-CY1JF102J	1k	1/16W Metal Oxide	AA	R2813	VRS-CZ1JF473J	47k	1/16W Metal Oxide	AA
R1483	VRS-CY1JF103J	10k	1/16W Metal Oxide	AA	R2814	VRS-CZ1JF563J	56k	1/16W Metal Oxide	AA
R1700	VRS-CZ1JF100J	10	1/16W Metal Oxide	AA	R2815	VRS-CZ1JF104J	100k	1/16W Metal Oxide	AA
R1701	VRS-CZ1JF100J	10	1/16W Metal Oxide	AA	R2818	VRS-CZ1JF104J	100k	1/16W Metal Oxide	AA
R1702	VRS-CZ1JF182J	1.8k	1/16W Metal Oxide	AA	R2819	VRS-CZ1JF105J	1M	1/16W Metal Oxide	AA
R1703	VRS-CZ1JF182J	1.8k	1/16W Metal Oxide	AA	R2820	VRS-CZ1JF223J	22k	1/16W Metal Oxide	AA
R1704	VRS-CZ1JF103J	10k	1/16W Metal Oxide	AA	R2821	VRS-CZ1JF154J	150k	1/16W Metal Oxide	AA
R1705	VRS-CZ1JF154J	150k	1/16W Metal Oxide	AA	R2822	VRS-CZ1JF473J	47k	1/16W Metal Oxide	AA
R1706	VRS-CZ1JF104J	100k	1/16W Metal Oxide	AA	R2823	VRS-CZ1JF102J	1k	1/16W Metal Oxide	AA
R1707	VRS-CZ1JF103J	10k	1/16W Metal Oxide	AA	R2824	VRS-CZ1JF100J	10	1/16W Metal Oxide	AA
R1708	VRS-CZ1JF1R0J	1	1/16W Metal Oxide	AA	R2825	VRS-CZ1JF472J	4.7k	1/16W Metal Oxide	AA
R1709	VRS-CZ1JF1R0J	1	1/16W Metal Oxide	AA	R2829	VRS-CZ1JF100J	10	1/16W Metal Oxide	AA
R1710	VRS-CZ1JF1R0J	1	1/16W Metal Oxide	AA	R2830	VRS-CZ1JF683J	68k	1/16W Metal Oxide	AA
R1711	VRS-CZ1JF1R0J	1	1/16W Metal Oxide	AA	R2831	VRS-CY1JFR22J	0.22	1/16W Metal Oxide	AA
R1712	VRS-CZ1JF105J	1M	1/16W Metal Oxide	AA	R2833	VRS-CZ1JF102D	1k	1/16W Metal Oxide	AA
R1713	VRS-CZ1JF331J	330	1/16W Metal Oxide	AA	R2835	VRS-CZ1JF153D	15k	1/16W Metal Oxide	AB
R1714	VRS-CZ1JF621J	620	1/16W Metal Oxide	AA	R2840	VRS-CZ1JF221J	220	1/16W Metal Oxide	AA
R1715	VRS-CZ1JF103J	10k	1/16W Metal Oxide	AA	R2851	VRS-CZ1JF330J	33	1/16W Metal Oxide	AA
R1716	VRS-CZ1JF223J	22k	1/16W Metal Oxide	AA	R2852	VRS-CZ1JF330J	33	1/16W Metal Oxide	AA
R1717	VRS-CZ1JF330J	33	1/16W Metal Oxide	AA	R2853	VRS-CZ1JF330J	33	1/16W Metal Oxide	AA
R1718	VRS-CZ1JF222J	2.2k	1/16W Metal Oxide	AA	R2856	VRS-CZ1JF000J	0	1/16W Metal Oxide	AA
R1719	VRS-CZ1JF103J	10k	1/16W Metal Oxide	AA	R2857	VRS-CZ1JF103J	10k	1/16W Metal Oxide	AA
R1720	VRS-CZ1JF000J	0	1/16W Metal Oxide	AA	R2858	VRS-CZ1JF473J	47k	1/16W Metal Oxide	AA
R1721	VRS-CY1JF000J	0	1/16W Metal Oxide	AA	R2859	VRS-CZ1JF103D	10k	1/16W Metal Oxide	AB
R1722	VRS-CZ1JF102J	1k	1/16W Metal Oxide	AA	R2860	VRS-CZ1JF101J	100	1/16W Metal Oxide	AA
R1723	VRS-CZ1JF182J	1.8k	1/16W Metal Oxide	AA	R2861	VRS-CZ1JF473J	47k	1/16W Metal Oxide	AA
R1724	VRS-CZ1JF182J	1.8k	1/16W Metal Oxide	AA	R2862	VRS-CZ1JF182D	1.8k	1/16W Metal Oxide	AB
R1725	VRS-CZ1JF562J	5.6k	1/16W Metal Oxide	AA	R2863	VRS-CZ1JF103D	10k	1/16W Metal Oxide	AB
R1726	VRS-CZ1JF330J	33	1/16W Metal Oxide	AA	R2901	VRS-CZ1JF123J	12k	1/16W Metal Oxide	AA
R1727	VRS-CZ1JF103J	10k	1/16W Metal Oxide	AA	R2902	VRS-CZ1JF123J	12k	1/16W Metal Oxide	AA
R1728	VRS-CZ1JF152J	1.5k	1/16W Metal Oxide	AA	R2903	VRS-CZ1JF104J	100k	1/16W Metal Oxide	AA
R1729	VRS-CZ1JF562J	5.6k	1/16W Metal Oxide	AA	R2905	VRS-CZ1JF334J	330k	1/16W Metal Oxide	AA
R1911	VRS-CZ1JF180J	18	1/16W Metal Oxide	AA	R2906	VRS-CZ1JF105J	1M	1/16W Metal Oxide	AA
R1912	VRS-CZ1JF105J	1M	1/16W Metal Oxide	AA	R2907	VRS-CY1JF000J	0	1/16W Metal Oxide	AA
R1913	VRS-CZ1JF105J	1M	1/16W Metal Oxide	AA	R2908	VRS-TV2BDR15JY	0.15	1/8W Metal Oxide	AA
R1914	VRS-CZ1JF104J	100k	1/16W Metal Oxide	AA	R2909	VRS-TV1JD1R5J	1.5	1/16W Metal Oxide	AA
R1925	VRS-CZ1JF153J	15k	1/16W Metal Oxide	AA	R2910	VRS-CZ1JF224D	220k	1/16W Metal Oxide	AA
R1927	VRS-CZ1JF682J	6.8k	1/16W Metal Oxide	AA	R2911	VRS-CZ1JF101J	100	1/16W Metal Oxide	AA
R1929	VRS-CZ1JF183D	18k	1/16W Metal Oxide	AB	R2913	VRS-TW3AF750J	75	1W Metal Oxide	AC
R1930	VRS-CZ1JF182D	1.8k	1/16W Metal Oxide	AB	R2914	VRS-CZ1JF152J	1.5k	1/16W Metal Oxide	AA
R1931	VRS-CZ1JF472D	4.7k	1/16W Metal Oxide	AB	R2916	VRS-CZ1JF823D	82k	1/16W Metal Oxide	AB
R1940	VRS-CZ1JF104J	100k	1/16W Metal Oxide	AA	R2917	VRS-CZ1JF105J	1M	1/16W Metal Oxide	AA
R1941	VRS-CZ1JF103J	10k	1/16W Metal Oxide	AA	R2918	VRS-CZ1JF474J	470k	1/16W Metal Oxide	AA
R1943	VRS-CZ1JF333D	33k	1/16W Metal Oxide	AB	R3401	VRS-CZ1JF181J	180	1/16W Metal Oxide	AA
R1944	VRS-CZ1JF562D	5.6k	1/16W Metal Oxide	AB	R3402	VRS-CZ1JF472J	4.7k	1/16W Metal Oxide	AA
R1945	VRS-CZ1JF183D	18k	1/16W Metal Oxide	AB	R3404	VRS-CZ1JF181J	180	1/16W Metal Oxide	AA
R1950	VRS-CZ1JF000J	0	1/16W Metal Oxide	AA	R3406	VRS-CZ1JF562J	5.6k	1/16W Metal Oxide	AA
R1956	VRS-CZ1JF473J	47k	1/16W Metal Oxide	AA	R3407	VRS-CZ1JF101J	100	1/16W Metal Oxide	AA
R1957	VRS-CZ1JF682D	6.8k	1/16W Metal Oxide	AB	R3409	VRS-CZ1JF121J	120	1/16W Metal Oxide	AA
R1958	VRS-CZ1JF000J	0	1/16W Metal Oxide	AA	R3410	VRS-CZ1JF151J	150	1/16W Metal Oxide	AA
R1959	VRS-CZ1JF273D	27k	1/16W Metal Oxide	AA	R3411	VRS-CZ1JF391J	390	1/16W Metal Oxide	AA
R1968	VRS-CZ1JF224J	220k	1/16W Metal Oxide	AA	R3412	VRS-CZ1JF221J	220	1/16W Metal Oxide	AA
R1969	VRS-CZ1JF104J	100k	1/16W Metal Oxide	AA	R3413	VRS-CZ1JF391J	390	1/16W Metal Oxide	AA
R1980	VRS-CZ1JF224J	220k	1/16W Metal Oxide	AA	R3414	VRS-CZ1JF102J	1k	1/16W Metal Oxide	AA
R1981	VRS-CZ1JF184J	180k	1/16W Metal Oxide	AA	R3415	VRS-CZ1JF151J	150	1/16W Metal Oxide	AA
R1982	VRS-CZ1JF104J	100k	1/16W Metal Oxide	AA	R3416	VRS-CZ1JF221J	220	1/16W Metal Oxide	AA
R1983	VRS-CZ1JF273J	27k	1/16W Metal Oxide	AA	R3417	VRS-CZ1JF221J	220	1/16W Metal Oxide	AA
R1984	VRS-CZ1JF333J	33k	1/16W Metal Oxide	AA	R3418	VRS-CZ1JF181J	180	1/16W Metal Oxide	AA
R1985	VRS-CZ1JF104J	100k	1/16W Metal Oxide	AA	R3419	VRS-CZ1JF472J	4.7k	1/16W Metal Oxide	AA
R1986	VRS-CZ1JF333J	33k	1/16W Metal Oxide	AA	R3420	VRS-CZ1JF472J	4.7k	1/16W Metal Oxide	AA
R1989	VRS-CZ1JF103J	10k	1/16W Metal Oxide	AA	R3421	VRS-CZ1JF183J	18k	1/16W Metal Oxide	AA
R1990	VRS-CZ1JF103J	10k	1/16W Metal Oxide	AA	R3422	VRS-CZ1JF151J	150	1/16W Metal Oxide	AA
R1991	VRS-CZ1JF104J	100k	1/16W Metal Oxide	AA	R3423	VRS-CZ1JF182J	1.8k	1/16W Metal Oxide	AA
R1992	VRS-CZ1JF331J	330	1/16W Metal Oxide	AA	R3424	VRS-CZ1JF151J	150	1/16W Metal Oxide	AA
R1994	VRS-CZ1JF103D	10k	1/16W Metal Oxide	AB	R3425	VRS-CZ1JF122J	1.2k	1/16W Metal Oxide	AA
R1995	VRS-CZ1JF103D	10k	1/16W Metal Oxide	AB	R3427	VRS-CZ1JF122J	1.2k	1/16W Metal Oxide	AA
R1996	VRS-CZ1JF562D	5.6k	1/16W Metal Oxide	AB	R3428	VRS-CZ1JF273J	27k	1/16W Metal Oxide	AA
R1997	VRS-CZ1JF000J	0	1/16W Metal Oxide	AA	R3429	VRS-CZ1JF151J	150	1/16W Metal Oxide	AA
R1998	VRS-CZ1JF203D	20k	1/16W Metal Oxide	AA	R3430	VRS-CZ1JF123J	12k	1/16W Metal Oxide	AA
R2801	VRS-CZ1JF101J	100	1/16W Metal Oxide	AA	R3432	VRS-CZ1JF333J	33k	1/16W Metal Oxide	AA
R2802	VRS-CZ1JF000J	0	1/16W Metal Oxide	AA	R3435	VRS-CZ1JF122J	1.2k	1/16W Metal Oxide	AA
R2803	VRS-CZ1JF223J	22k	1/16W Metal Oxide	AA	R3436	VRS-CZ1JF182J	1.8k	1/16W Metal Oxide	AA

Ref. No.	Part No.	★	Description	Code	Ref. No.	Part No.	★	Description	Code
R3437	VRS-CZ1JF472J	4.7k	1/16W Metal Oxide	AA	R4488	VRS-CZ1JF103J	10k	1/16W Metal Oxide	AA
R3442	VRS-CZ1JF332J	3.3k	1/16W Metal Oxide	AA	R4494	VRS-CZ1JF000J	0	1/16W Metal Oxide	AA
R3445	VRS-CZ1JF122J	1.2k	1/16W Metal Oxide	AA	R4495	VRS-CZ1JF000J	0	1/16W Metal Oxide	AA
R3451	VRS-CZ1JF334J	330k	1/16W Metal Oxide	AA	R5701	VRS-CZ1JF000J	0	1/16W Metal Oxide	AA
R3452	VRS-CZ1JF820J	82	1/16W Metal Oxide	AA				(NZ100U/C/K/NZ150U)	
R3454	VRS-CZ1JF102J	1k	1/16W Metal Oxide	AA	R5702	VRS-CZ1JF104J	100k	1/16W Metal Oxide	AA
R3457	VRS-CZ1JF820J	82	1/16W Metal Oxide	AA				(NZ100U/C/K/NZ150U)	
R3462	VRS-CZ1JF271J	270	1/16W Metal Oxide	AA	R5703	VRS-CZ1JF102J	1k	1/16W Metal Oxide	AA
R3463	VRS-CZ1JF122J	1.2k	1/16W Metal Oxide	AA				(NZ100U/C/K/NZ150U)	
R3468	VRS-CZ1JF100J	10	1/16W Metal Oxide	AA	R5704	VRS-CZ1JF270J	27	1/16W Metal Oxide	AA
R3469	VRS-CZ1JF390J	39	1/16W Metal Oxide	AA				(NZ100U/C/K/NZ150U)	
R3470	VRS-CZ1JF101J	100	1/16W Metal Oxide	AA	R5705	VRS-CZ1JF270J	27	1/16W Metal Oxide	AA
R3471	VRS-CZ1JF222J	2.2k	1/16W Metal Oxide	AA				(NZ100U/C/K/NZ150U)	
R3472	VRS-CZ1JF562J	5.6k	1/16W Metal Oxide	AA	R5706	VRS-CZ1JF152J	1.5k	1/16W Metal Oxide	AA
R3473	VRS-CZ1JF562J	5.6k	1/16W Metal Oxide	AA				(NZ100U/C/K/NZ150U)	
R3478	VRS-CZ1JF123J	12k	1/16W Metal Oxide	AA	R5708	VRS-CZ1JF000J	0	1/16W Metal Oxide	AA
R3479	VRS-CZ1JF183J	18k	1/16W Metal Oxide	AA				(NZ100U/C/K/NZ150U)	
R3480	VRS-CZ1JF681J	680	1/16W Metal Oxide	AA	R5710	VRS-CZ1JF103J	10k	1/16W Metal Oxide	AA
R3481	VRS-CZ1JF680J	68	1/16W Metal Oxide	AB				(NZ100U/C/K/NZ150U)	
R3482	VRS-CZ1JF562J	5.6k	1/16W Metal Oxide	AA	R5711	VRS-CZ1JF000J	0	1/16W Metal Oxide	AA
R3486	VRS-CZ1JF000J	0	1/16W Metal Oxide	AA				(NZ100U/C/K/NZ150U)	
R3487	VRS-CZ1JF332J	3.3k	1/16W Metal Oxide	AA	R5712	VRS-CZ1JF000J	0	1/16W Metal Oxide	AA
R3488	VRS-CZ1JF681D	680	1/16W Metal Oxide	AB				(NZ100U/C/K/NZ150U)	
R3489	VRS-CZ1JF332J	3.3k	1/16W Metal Oxide	AA	R5715	VRS-CZ1JF103J	10k	1/16W Metal Oxide	AA
R3492	VRS-CZ1JF222J	2.2k	1/16W Metal Oxide	AA				(NZ100U/C/K/NZ150U)	
R3493	VRS-CZ1JF272J	2.7k	1/16W Metal Oxide	AA	R5716	VRS-CZ1JF102J	1k	1/16W Metal Oxide	AA
R3495	VRS-CZ1JF103J	10k	1/16W Metal Oxide	AA				(NZ100U/C/K/NZ150U)	
R3496	VRS-CZ1JF332J	3.3k	1/16W Metal Oxide	AA	R5717	VRS-CZ1JF102J	1k	1/16W Metal Oxide	AA
R3499	VRS-CZ1JF221J	220	1/16W Metal Oxide	AA				(NZ100U/C/K/NZ150U)	
R3701	VRS-CZ1JF102J	1k	1/16W Metal Oxide	AA	R7401	VRS-CZ1JF561J	560	1/16W Metal Oxide	AA
R3702	VRS-CZ1JF102J	1k	1/16W Metal Oxide	AA	R7402	VRS-CZ1JF472J	4.7k	1/16W Metal Oxide	AA
			(NZ100U/C/K/NZ150U)		R7403	VRS-CZ1JF273J	27k	1/16W Metal Oxide	AA
R3703	VRS-CZ1JF102J	1k	1/16W Metal Oxide	AA	R7413	VRS-CZ1JF512D	5.1k	1/16W Metal Oxide	AA
			(NZ100U/C/K/NZ150U)		R7415	VRS-CZ1JF560D	56	1/16W Metal Oxide	AB
R3704	VRS-CZ1JF102J	1k	1/16W Metal Oxide	AA	R7416	VRS-CZ1JF560D	56	1/16W Metal Oxide	AB
			(NZ100U/C/K/NZ150U)		R7417	VRS-CZ1JF560D	56	1/16W Metal Oxide	AB
R3705	VRS-CZ1JF102J	1k	1/16W Metal Oxide	AA	R7418	VRS-CZ1JF560D	56	1/16W Metal Oxide	AB
R3706	VRS-CZ1JF000J	0	1/16W Metal Oxide	AA	R7419	VRS-CZ1JF221J	220	1/16W Metal Oxide	AA
R3708	VRS-CZ1JF102J	1k	1/16W Metal Oxide	AA	R7420	VRS-CZ1JF104J	100k	1/16W Metal Oxide	AA
R3709	VRS-CZ1JF102J	1k	1/16W Metal Oxide	AA	R7422	VRS-CZ1JF392D	3.9k	1/16W Metal Oxide	AB
R3710	VRS-CZ1JF102J	1k	1/16W Metal Oxide	AA	R7423	VRS-CZ1JF392D			

Ref. No.	Part No.	★	Description	Code	Ref. No.	Part No.	★	Description	Code
MISCELLANEOUS PARTS									
△ CP1	QPRTRA003WJZZY		1A 24V	AD	C556	VCKYCZ1HF103Z	0.01	50V Ceramic	AB
△ CP2	QPRTRA003WJZZY		1A 24V	AD	C557	VCCCCZ1HH101J	100p	50V Ceramic	AB
J1401	QJAKE0052TAZZ		Jack, 6Pin	AF	C558	VCKYCZ1HF103Z	0.01	50V Ceramic	AB
J5701	QJAKEA014WJZZ		Jack, 5Pin	AE	C559	VCKYCZ1HF103Z	0.01	50V Ceramic	AB
			(NZ100U/C/K/NZ150U)		C560	VCKYCZ1HF103Z	0.01	50V Ceramic	AB
J7401	QJAKZ0074TAZZ		Jack, 4Pin	AG	C561	VCKYCZ1HF103Z	0.01	50V Ceramic	AB
P901	QPLGN0663TAZZ		Plug, 6Pin	AD	C562	VCSATA0JJ106M	10	6.3V Tantalum	AD
P1203	QPLGN0274TAZZ		Plug, 2Pin	AC	C563	VCSATA1AJ106M	10	10V Tantalum	AC
SC701	QSOCN0624TAN1Y		Socket, 6Pin	AD	C564	VCKYCZ1HF103Z	0.01	50V Ceramic	AB
SC900	QCNCW2080TAZZ		Connector, 20Pin	AF	C565	VCKYCY1AB224K	0.22	10V Ceramic	AB
SC1201	QSOCN3311TAN1		Socket, 33Pin	AG	C567	VCKYCZ1HF103Z	0.01	50V Ceramic	AB
SC1202	QSOCN3311TAN1		Socket, 33Pin	AG	C568	VCKYCZ1HB102K	1000p	50V Ceramic	AB
SC1204	QSOCN2711TAN1		Socket, 27Pin	AG	C569	VCKYCZ1AF104Z	0.1	10V Ceramic	AB
			(NZ100U/C/K/NZ150U)		C570	VCCCCZ1HH151J	150p	50V Ceramic	AB
SC2801	QSOCN2498TAZZY		Socket, 24Pin	AE	C571	VCKYCZ1HF103Z	0.01	50V Ceramic	AB
SC2802	QSOCN0907REN1Y		Socket, 9Pin	AD	C572	VCKYCZ1HF103Z	0.01	50V Ceramic	AB
SC3301	QCNCW8080TAZZ		Connector, 80Pin	AH	C573	VCKYCZ1HB221K	220p	50V Ceramic	AA
SC3302	QCNCM1052TAZZY		Connector, 10Pin	AE	C574	VCKYCZ1HB221K	220p	50V Ceramic	AA
SW901	QSW-MA001WJZZY		Switch, Batt_Detect	AD	RESISTORS				
DUNKTB189QA00 CAMERA HEAD PWB UNIT					R21	VRS-CZ1JF100J	10	1/16W Metal Oxide	AA
					R22	VRS-CZ1JF271J	270	1/16W Metal Oxide	AA
					R23	VRS-CZ1JF000J	0	1/16W Metal Oxide	AA
					R24	VRS-CZ1JF220J	22	1/16W Metal Oxide	AA
					R25	VRS-CZ1JF220J	22	1/16W Metal Oxide	AA
					R26	VRS-CZ1JF220J	22	1/16W Metal Oxide	AA
					R27	VRS-CZ1JF220J	22	1/16W Metal Oxide	AA
					R28	VRS-CZ1JF220J	22	1/16W Metal Oxide	AA
					R29	VRS-CZ1JF104J	100k	1/16W Metal Oxide	AA
					R30	VRS-CZ1JF181J	180	1/16W Metal Oxide	AA
					R31	VRS-CZ1JF822J	8.2k	1/16W Metal Oxide	AA
					R32	VRS-CZ1JF000J	0	1/16W Metal Oxide	AA
					R33	VRS-CZ1JF220J	22	1/16W Metal Oxide	AA
					R34	VRS-CZ1JF220J	22	1/16W Metal Oxide	AA
					R35	VRS-CZ1JF000J	0	1/16W Metal Oxide	AA
					R38	VRS-CY1JF000J	0	1/16W Metal Oxide	AA
					R51	VRS-CZ1JF153D	15k	1/16W Metal Oxide	AB
					R52	VRS-CZ1JF244D	240k	1/16W Metal Oxide	AA
					R53	VRS-CZ1JF000J	0	1/16W Metal Oxide	AA
					R54	VRS-CZ1JF104J	100k	1/16W Metal Oxide	AA
					R551	VRS-CZ1JF000J	0	1/16W Metal Oxide	AA
					R552	VRS-CZ1JF103J	10k	1/16W Metal Oxide	AA
					R553	VRS-CZ1JF104J	100k	1/16W Metal Oxide	AA
					R554	VRS-CY1JF5R6J	5.6	1/16W Metal Oxide	AA
					R555	VRS-CY1JF5R6J	5.6	1/16W Metal Oxide	AA
					R556	VRS-CZ1JF180J	18	1/16W Metal Oxide	AA
					R557	VRS-CY1JF5R6J	5.6	1/16W Metal Oxide	AA
					R558	VRS-CZ1JF682J	6.8k	1/16W Metal Oxide	AA
					R559	VRS-CY1JF5R6J	5.6	1/16W Metal Oxide	AA
					R560	VRS-CZ1JF180J	18	1/16W Metal Oxide	AA
					R561	VRS-CZ1JF472J	4.7k	1/16W Metal Oxide	AA
					R562	VRS-CZ1JF622D	6.2k	1/16W Metal Oxide	AA
					R563	VRS-CZ1JF104D	100k	1/16W Metal Oxide	AB
					R564	VRS-CZ1JF103D	10k	1/16W Metal Oxide	AB
					R565	VRS-CZ1JF223J	22k	1/16W Metal Oxide	AA
					R566	VRS-CZ1JF273D	27k	1/16W Metal Oxide	AA
					R567	VRS-CZ1JF153J	15k	1/16W Metal Oxide	AA
					R568	VRS-CZ1JF105J	1M	1/16W Metal Oxide	AA
					R569	VRS-CZ1JF154J	150k	1/16W Metal Oxide	AA
					R570	VRS-CZ1JF562J	5.6k	1/16W Metal Oxide	AA
					R571	VRS-CZ1JF153J	15k	1/16W Metal Oxide	AA
					R572	VRS-CZ1JF223J	22k	1/16W Metal Oxide	AA
					R573	VRS-CZ1JF223J	22k	1/16W Metal Oxide	AA
					R574	VRS-CZ1JF222J	2.2k	1/16W Metal Oxide	AA
					R575	VRS-CZ1JF274J	270k	1/16W Metal Oxide	AA
					R576	VRS-CZ1JF122J	1.2k	1/16W Metal Oxide	AA
					R577	VRS-CZ1JF472J	4.7k	1/16W Metal Oxide	AA
					R578	VRS-CZ1JF181J	180	1/16W Metal Oxide	AA
					R579	VRS-CZ1JF181J	180	1/16W Metal Oxide	AA
					R580	VRS-CZ1JF272J	2.7k	1/16W Metal Oxide	AA
					R581	VRS-CZ1JF274J	270k	1/16W Metal Oxide	AA
					R582	VRS-CZ1JF272J	2.7k	1/16W Metal Oxide	AA
					R583	VRS-CZ1JF471J	470	1/16W Metal Oxide	AA
INTEGRATED CIRCUITS									
IC21	VHiUPD16510-1		UPD16510, V_Driver	AR					
IC22	VHiLR38650/-1Q		LR38650, Timing Generator	AQ					
IC51	VHiMB88146A-1		MB88146A, D/A Converter	AH					
IC551	VHiUPD16835-1		UPD16835, Lens Driver	AM					
IC552	VHiNJM2902V-1		NJM2902V, OP Amp	AD					
TRANSISTORS									
Q21	VSKTC4075EY-1Y		KTC4075EY	AB					
Q551	VSKTC4075EY-1Y		KTC4075EY	AB					
Q552	VSKRC402E+-1Y		KRC402E+-	AB					
DIODE									
D551	VHDMC2852/-1		MC2852	AB					
PACKAGED CIRCUIT									
X21	RCRSZA006WJZZY		Crystal, CRSZA006WJ	AM					
COILS									
	PFiLW0084TAZZ		Filter, FiLW0084TA	AS					
L21	VPD9M100KR86N		Peaking, 10μH	AC					
L551	VPD9M100KR86N		Peaking, 10μH	AC					
CAPACITORS									
C21	VCSATE1CJ226M	22	16V Tantalum	AE					
C23	VCKYCZ1CB103K	0.01	16V Ceramic	AB					
C24	VCSATJ1VJ685M	6.8	35V Tantalum	AE					
C25	VCKYCZ1HF103Z	0.01	50V Ceramic	AB					
C26	VCKYCZ1CB103K	0.01	16V Ceramic	AB					
C27	VCKYCZ1CB103K	0.01	16V Ceramic	AB					
C28	VCKYCZ1CB103K	0.01	16V Ceramic	AB					
C29	VCKYCZ1CB103K	0.01	16V Ceramic	AB					
C30	VCSATA0JJ106M	10	6.3V Tantalum	AD					
C31	VCSATA1AJ106M	10	10V Tantalum	AC					
C32	VCKYCZ1CB103K	0.01	16V Ceramic	AB					
C33	VCSATA1AJ106M	10	10V Tantalum	AC					
C35	VCSATE1AJ476M	47	10V Tantalum	AD					
C36	VCKYCZ1HB102K	1000p	50V Ceramic	AB					
C37	VCKYCZ1CB103K	0.01	16V Ceramic	AB					
C51	VCKYTV1AB105K	1	10V Ceramic	AD					
C52	VCCCCZ1HH101J	100p	50V Ceramic	AB					
C53	VCCCCZ1HH101J	100p	50V Ceramic	AB					
C54	VCKYCZ1CB103K	0.01	16V Ceramic	AB					
C551	VCSATA1CJ106M	10	16V Tantalum	AD					
C552	VCKYCZ1HF103Z	0.01	50V Ceramic	AB					
C553	VCCCCZ1HH330J	33p	50V Ceramic	AB					
C554	VCKYCZ1HF103Z	0.01	50V Ceramic	AB					
C555	VCCCCZ1HH101J	100p	50V Ceramic	AB					

Ref. No.	Part No.	★	Description	Code	Ref. No.	Part No.	★	Description	Code
BALUNE					C2609	VCKYTV1AB105K	1	10V Ceramic	AD
FB36	RBLN-0049TAZZ		Balun, BLN-0049TA	AD	C2610	VCKYCYZ1HB102K	1000p	50V Ceramic	AB
MISCELLANEOUS PARTS					C2611	VCKYCYZ1HB102K	1000p	50V Ceramic	AB
P51	QPLGN0276TAZZ		Plug, 2Pin	AD	RESISTORS				
P52	QPLGN0274TAZZ		Plug, 2Pin	AC	R603	VRS-CZ1JF103J	10k	1/16W Metal Oxide	AA
SC21	QSOCN3311TAN1		Socket, 33Pin	AG	R604	VRS-CZ1JF103J	10k	1/16W Metal Oxide	AA
SC53	QCNCW3396TAZZY		Connector, 33Pin	AG	R605	VRS-CZ1JF103J	10k	1/16W Metal Oxide	AA
SC551	QSOCN2498TAZZY		Socket, 24Pin	AE	R606	VRS-CZ1JF102J	1k	1/16W Metal Oxide	AA
DUNTKB190QA00(VL-NZ100U/C/K/NZ150U) DUNTKB190QA01(VL-NZ50U/C) AUDIO I/O PWB UNIT					R607	VRS-CZ1JF102J	1k	1/16W Metal Oxide	AA
INTEGRATED CIRCUITS					R608	VRS-CZ1JF683J	68k	1/16W Metal Oxide	AA
IC601	VHiBH7761KV-1		BH7761KV, Audio I/O	AS	R609	VRS-CZ1JF683J	68k	1/16W Metal Oxide	AA
IC2601	VHiMB88146A-1		MB88146A, I/O Expander D/A Converter	AH	R612	VRS-CZ1JF223J	22k	1/16W Metal Oxide	AA
TRANSISTORS					R613	VRS-CZ1JF222J	2.2k	1/16W Metal Oxide	AA
Q601	VSFMG12///-1		FMG12	AD	R614	VRS-CZ1JF222J	2.2k	1/16W Metal Oxide	AA
Q603	VSKRC404E+-1Y		KRC404E++	AB	R617	VRS-CZ1JF682J	6.8k	1/16W Metal Oxide	AA
Q604	VSHN2A01FU/-1		HN2A01FU	AC	R618	VRS-CZ1JF103J	10k	1/16W Metal Oxide	AA
Q605	VSKRX203U+-1Y		KRX203U++	AB	R619	VRS-CZ1JF182J	1.8k	1/16W Metal Oxide	AA
COILS					R620	VRS-CZ1JF223J	22k	1/16W Metal Oxide	AA
L601	VPD9M100KR86N		Peaking, 10μH	AC	R621	VRS-CZ1JF563J	56k	1/16W Metal Oxide	AA
L602	VPD9M470K4R1N		Peaking, 47μH	AC	R622	VRS-CZ1JF104J	100k	1/16W Metal Oxide	AA
CAPACITORS					R623	VRS-CZ1JF334J	330k	1/16W Metal Oxide	AA
C607	VCKYTV1CF225Z	2.2	16V Ceramic	AC	R624	VRS-CZ1JF103J	10k	1/16W Metal Oxide	AA
C608	VCKYTV1CF225Z	2.2	16V Ceramic	AC	R625	VRS-CZ1JF333J	33k	1/16W Metal Oxide	AA
C609	VCKYCYZ1HB102K	1000p	50V Ceramic	AB	R626	VRS-CZ1JF223J	22k	1/16W Metal Oxide	AA
C610	VCKYCYZ1HB102K	1000p	50V Ceramic	AB	R627	VRS-CZ1JF103J	10k	1/16W Metal Oxide	AA
C611	VCKYCY0JF105Z	1	6.3V Ceramic	AB	R628	VRS-CZ1JF682J	6.8k	1/16W Metal Oxide	AA
C612	VCKYCYZ1AB104K	0.1	10V Ceramic	AB	R629	VRS-CZ1JF182J	1.8k	1/16W Metal Oxide	AA
C613	VCKYCY0JB105K	1	6.3V Ceramic (NZ100U/C/K/NZ150U)	AC	R630	VRS-CZ1JF223J	22k	1/16W Metal Oxide	AA
C614	VCKYCYZ1AB104K	0.1	10V Ceramic	AB	R631	VRS-CZ1JF333J	33k	1/16W Metal Oxide	AA
C617	VCKYCY0JB105K	1	6.3V Ceramic (NZ100U/C/K/NZ150U)	AC	R632	VRS-CZ1JF334J	330k	1/16W Metal Oxide	AA
C618	VCSATE1AJ476M	47	10V Tantalum	AD	R633	VRS-CZ1JF273J	27k	1/16W Metal Oxide	AA
C619	VCKYCYZ1AB333K	0.033	10V Ceramic	AB	R634	VRS-CZ1JF153J	15k	1/16W Metal Oxide	AA
C620	VCKYCYZ1CB103K	0.01	16V Ceramic	AB	R635	VRS-CZ1JF123J	12k	1/16W Metal Oxide	AA
C621	VCKYCY0JF105Z	1	6.3V Ceramic	AB	R637	VRS-CZ1JF106J	10M	1/16W Metal Oxide	AA
C622	VCKYCYZ1HB222K	2200p	50V Ceramic	AB	R638	VRS-CZ1JF562J	5.6k	1/16W Metal Oxide	AA
C623	VCKYCY0JF105Z	1	6.3V Ceramic	AB	R640	VRS-CZ1JF000J	0	1/16W Metal Oxide	AA
C624	VCKYCYZ1AB333K	0.033	10V Ceramic	AB	R641	VRS-CZ1JF222J	2.2k	1/16W Metal Oxide	AA
C626	VCKYCYZ1HB102K	1000p	50V Ceramic	AB	R642	VRS-CZ1JF222J	2.2k	1/16W Metal Oxide	AA
C627	VCKYCYZ1AB333K	0.033	10V Ceramic	AB	R643	VRS-CZ1JF223J	22k	1/16W Metal Oxide	AA
C628	VCKYCYZ1AB104K	0.1	10V Ceramic	AB	R2601	VRS-CZ1JF000J	0	1/16W Metal Oxide	AA
C629	VCKYCYZ1EB472K	4700p	25V Ceramic	AB	R2606	VRS-CZ1JF000J	0	1/16W Metal Oxide	AA
C630	VCSATE0JJ107M	100	6.3V Tantalum	AE	R2608	VRS-CZ1JF103J	10k	1/16W Metal Oxide	AA
C631	VCKYCYZ1CB103K	0.01	16V Ceramic	AB	R2609	VRS-CZ1JF000J	0	1/16W Metal Oxide	AA
C632	VCSATA1AJ475M	4.7	10V Tantalum	AC	R2610	VRS-CZ1JF000J	0	1/16W Metal Oxide	AA
C633	VCKYCYZ1AB104K	0.1	10V Ceramic	AB	R2611	VRS-CZ1JF000J	0	1/16W Metal Oxide	AA
C634	VCKYCYZ1HB222K	2200p	50V Ceramic	AB	R2612	VRS-CZ1JF000J	0	1/16W Metal Oxide	AA
C635	VCSATA0JJ156M	15	6.3V Tantalum	AC	R2613	VRS-CZ1JF000J	0	1/16W Metal Oxide	AA
C636	VCKYCYZ1EB472K	4700p	25V Ceramic	AB	R2614	VRS-CZ1JF000J	0	1/16W Metal Oxide	AA
C637	VCKYCYZ1AB333K	0.033	10V Ceramic	AB	R2615	VRS-CZ1JF000J	0	1/16W Metal Oxide	AA
C638	VCSATE1AJ476M	47	10V Tantalum	AD	R2616	VRS-CZ1JF000J	0	1/16W Metal Oxide	AA
C639	VCKYCY0JF105Z	1	6.3V Ceramic	AB	R2617	VRS-CZ1JF000J	0	1/16W Metal Oxide	AA
C640	VCSATA0JJ226M	22	6.3V Tantalum	AD	R2619	VRS-CZ1JF000J	0	1/16W Metal Oxide	AA
C641	VCKYCYZ1AF104Z	0.1	10V Ceramic	AB	R2620	VRS-CZ1JF104J	100k	1/16W Metal Oxide	AA
C642	VCKYCYZ1AF104Z	0.1	10V Ceramic	AB	R2621	VRS-CZ1JF104J	100k	1/16W Metal Oxide	AA
C643	VCKYTV1AB105K	1	10V Ceramic	AD	R2622	VRS-CZ1JF104J	100k	1/16W Metal Oxide	AA
C644	VCSATA0JJ226M	22	6.3V Tantalum	AD	R2623	VRS-CZ1JF104J	100k	1/16W Metal Oxide	AA
C2602	VCKYCYZ1CB103K	0.01	16V Ceramic	AB	R2624	VRS-CZ1JF104J	100k	1/16W Metal Oxide	AA
C2605	VCCCCZ1HH101J	100p	50V Ceramic	AB	R2625	VRS-CZ1JF104J	100k	1/16W Metal Oxide	AA
C2606	VCCCCZ1HH101J	100p	50V Ceramic	AB	R2626	VRS-CZ1JF104J	100k	1/16W Metal Oxide	AA
C2607	VCKYCYZ1AF104Z	0.1	10V Ceramic	AB	R2627	VRS-CZ1JF104J	100k	1/16W Metal Oxide	AA
C2608	VCKYTV1AB105K	1	10V Ceramic	AD	R2628	VRS-CZ1JF104J	100k	1/16W Metal Oxide	AA
					R2629	VRS-CZ1JF104J	100k	1/16W Metal Oxide	AA
					R2630	VRS-CZ1JF104J	100k	1/16W Metal Oxide	AA
MISCELLANEOUS PARTS					MISCELLANEOUS PARTS				
P601	QPLGN0276TAZZ		Plug, 2Pin	AD	P601	QPLGN0276TAZZ		Plug, 2Pin	AD
SC2601	QSOCN1090TAZZY		Socket, 10Pin	AD	SC2601	QSOCN1090TAZZY		Socket, 10Pin	AD
SC2602	QSOCN1160TAZZ		Socket, 11Pin	AD	SC2602	QSOCN1160TAZZ		Socket, 11Pin	AD
SC2604	QCNCW3396TAZZY		Connector, 33Pin	AG	SC2604	QCNCW3396TAZZY		Connector, 33Pin	AG

Ref. No.	Part No.	★	Description	Code
DUNTKB191PM00(VL-NZ100U/C/K/NZ150U) CARD PWB UNIT				
TRANSISTORS				
Q1501	VSKTA2014EY-1Y		KTA2014EY	AB
Q1502	VSHN2C01FU/-1		HN2C01FU	AC
CAPACITORS				
C1501	VCSATA0JJ336M	33	6.3V Tantalum	AD
C1502	VCKYCZ1CB103K	0.01	16V Ceramic	AB
C1503	VCKYCZ1AF104Z	0.1	10V Ceramic	AB
RESISTORS				
R1501	VRS-CZ1JF103J	10k	1/16W Metal Oxide	AA
R1502	VRS-CZ1JF103J	10k	1/16W Metal Oxide	AA
R1504	VRS-CZ1JF103J	10k	1/16W Metal Oxide	AA
R1505	VRS-CZ1JF103J	10k	1/16W Metal Oxide	AA
R1506	VRS-CZ1JF103J	10k	1/16W Metal Oxide	AA
R1507	VRS-CZ1JF000J	0	1/16W Metal Oxide	AA
R1508	VRS-CZ1JF103D	10k	1/16W Metal Oxide	AB
R1509	VRS-CZ1JF103D	10k	1/16W Metal Oxide	AB
R1510	VRS-CZ1JF104J	100k	1/16W Metal Oxide	AA
R1511	VRS-CZ1JF152J	1.5k	1/16W Metal Oxide	AA
R1512	VRS-CZ1JF222D	2.2k	1/16W Metal Oxide	AA
R1513	VRS-CZ1JF000J	0	1/16W Metal Oxide	AA
R1514	VRS-CZ1JF153D	15k	1/16W Metal Oxide	AB
MISCELLANEOUS PARTS				
SC1501	QSOCZ0075TAZZY		Socket, 15Pin	AM
SC1502	QCNCW2796TAZZ		Connector, 27Pin	AG
SW1501	QSW-MA001WJZZY		Switch	AD
DUNTKB192QA00 INVERTER PWB UNIT				
TRANSISTOR				
Q9801	VSCPH5504+-1Y		CPH5504++	AE
COIL AND TRANSFORMER				
L9801	RCiLP0349TAZZY		Coil, 33μH	AD
△ T9800	RTRNZ0166TAZZY		Transformer	AK
CAPACITORS				
C9800	RC-KZ0055TAZZ	3.3	16V Ceramic	AD
C9802	VCKYCZ1AF104Z	0.1	10V Ceramic	AB
C9807	RC-CZ0061TAZZY	0.022	25V Ceramic	AD
C9810	VCKYCY1HB332K	3300p	50V Ceramic	AA
C9812	RC-KZ0351CEZZ	18p	3kV Ceramic	AD
RESISTORS				
R9803	VRS-CZ1JF152J	1.5k	1/16W Metal Oxide	AA
R9804	VRS-CZ1JF152J	1.5k	1/16W Metal Oxide	AA
R9808	VRS-CZ1JF271D	270	1/16W Metal Oxide	AB
R9809	VRS-CZ1JF271D	270	1/16W Metal Oxide	AB
MISCELLANEOUS PARTS				
BAT9801	QTANS9045TAFW		Li Batt Terminal	AC
BAT9802	QTANS9046TAFW		Li Batt Terminal	AC
SC9801	QSOCN0924TAN1Y		Socket, 9Pin	AD
SC9802	QCNCWA021WJZZY		Connector, 4Pin	AE
SW9800	QSW-M0018TAZZ		Switch, Eject SW	AC
DUNTKB193PM00 OPERATION PWB UNIT				
CAPACITOR				
C2001	VCKYCZ1AF104Z	0.1	10V Ceramic	AB

Ref. No.	Part No.	★	Description	Code
RESISTORS				
R2001	VRS-CZ1JF750J	75	1/16W Metal Oxide	AA
R2002	VRS-CZ1JF153J	15k	1/16W Metal Oxide	AA
R2003	VRS-CZ1JF472J	4.7k	1/16W Metal Oxide	AA
MISCELLANEOUS PARTS				
RMC2001	RRMCU0021TAZZY		Remote Receiver	AK
SC2001	QSOCN0624TAN1Y		Socket, 6Pin	AD
SW2001	QSW-K0100TAZZ		Switch	AC
SW2002	QSW-K0100TAZZ		Switch	AC
SW2003	QSW-K0100TAZZ		Switch	AC
DUNTKB246PM00 DC JACK PWB UNIT				
LED				
D2900	RH-PXA018WJZZY		PhotoDiode, PXA018WJ	AC
COIL				
L2900	RCiLFA009WJZZY		Coil, CiLFA009WJ	AG
MISCELLANEOUS PARTS				
	QCNCW-A392WJZZ		Connecting Cord	AD
J2900	QJAKCA002WJZZY		Jack, 4Pin	AE
P2900	QPLGN0658REZZ		Plug, 6Pin	AD
DUNTKB188PM00 CCD PWB UNIT				
INTEGRATED CIRCUIT				
IC101	VHiCXA2096N-1		CXA2096N, CDS/AGC	AQ
TRANSISTOR				
Q1	VS2SC5384C/-1		2SC5384C	AB
COIL				
L101	VPD9M100KR86N		Peaking, 10μH	AC
CAPACITORS				
C1	VCSATE1VJ335M	3.3	35V Tantalum	AD
C2	VCKYCZ1HF103Z	0.01	50V Ceramic	AB
C3	VCKYCZ1HF103Z	0.01	50V Ceramic	AB
C5	VCKYCZ1CB103K	0.01	16V Ceramic	AB
C6	VCKYCY1EB104KY	0.1	25V Ceramic	AB
C7	VCKYCZ1HB102K	1000p	50V Ceramic	AB
C10	VCCCCZ1HH100D	10p	50V Ceramic	AB
C101	VCSATA0JJ336M	33	6.3V Tantalum	AD
C102	VCKYTV1CB105K	1	16V Ceramic	AC
C103	VCKYTV1CB105K	1	16V Ceramic	AC
C104	VCKYCZ1CB103K	0.01	16V Ceramic	AB
C105	VCKYCZ1CB103K	0.01	16V Ceramic	AB
C106	VCKYCZ1CB103K	0.01	16V Ceramic	AB
C107	VCSATA0JJ106M	10	6.3V Tantalum	AD
C108	VCKYCZ1CB103K	0.01	16V Ceramic	AB
C109	VCKYCZ1EF223Z	0.022	25V Ceramic	AB
C110	VCKYCZ1AF104Z	0.1	10V Ceramic	AB
C111	VCSATA0JJ106M	10	6.3V Tantalum	AD
C112	VCKYCZ1CB103K	0.01	16V Ceramic	AB
RESISTORS				
R3	VRS-CZ1JF332D	3.3k	1/16W Metal Oxide	AA
R4	VRS-CZ1JF105J	1M	1/16W Metal Oxide	AA
R5	VRS-CZ1JF105J	1M	1/16W Metal Oxide	AA
R7	VRS-CZ1JF000J	0	1/16W Metal Oxide	AA
R101	VRS-CZ1JF182J	1.8k	1/16W Metal Oxide	AA
R102	VRS-CZ1JF182J	1.8k	1/16W Metal Oxide	AA
R103	VRS-CZ1JF000J	0	1/16W Metal Oxide	AA
R104	VRS-CZ1JF103J	10k	1/16W Metal Oxide	AA
R105	VRS-CZ1JF473J	47k	1/16W Metal Oxide	AA

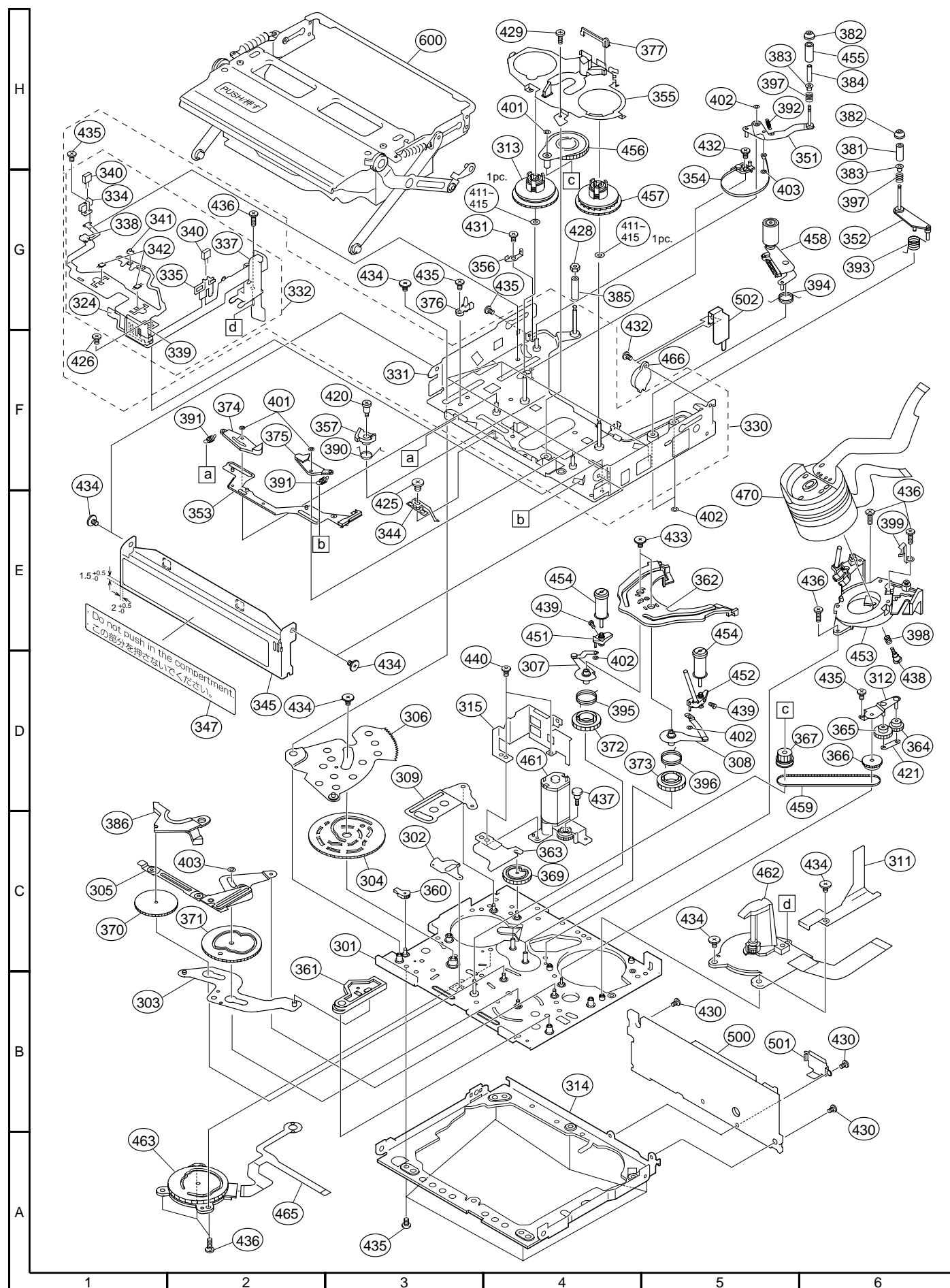
Ref. No.	Part No.	★	Description	Code	Ref. No.	Part No.	★	Description	Code
R106	VRS-CZ1JF562J	5.6k	1/16W Metal Oxide	AA	R312	VRS-CZ1JF102J	1k	1/16W Metal Oxide	AA
R107	VRS-CZ1JF223J	22k	1/16W Metal Oxide	AA	R313	VRS-CZ1JF822J	8.2k	1/16W Metal Oxide	AA
R108	VRS-CZ1JF223J	22k	1/16W Metal Oxide	AA	R314	VRS-CZ1JF101J	100	1/16W Metal Oxide	AA
MISCELLANEOUS PART					R315	VRS-CZ1JF102J	1k	1/16W Metal Oxide	AA
SC101	QCNCW3396TAZZY		Connector, 33Pin	AG	R316	VRS-CZ1JF473J	47k	1/16W Metal Oxide	AA
RAMP-0035TAN0 HEAD AMP PWB UNIT					R317	VRS-CZ1JF563J	56k	1/16W Metal Oxide	AA
INTEGRATED CIRCUITS					R318	VRS-CZ1JF513J	51k	1/16W Metal Oxide	AA
IC301	VHIBH7275KV-1		BH7275KV, REC/PB Amp IC	AU	R319	VRS-CZ1JF182J	1.8k	1/16W Metal Oxide	AA
IC302	VHiM24C04W6-1		M24C04W6, E ² PROM IC	AE	R320	VRS-CZ1JF182J	1.8k	1/16W Metal Oxide	AA
TRANSISTORS					R321	VRS-CZ1JF682J	6.8k	1/16W Metal Oxide	AA
Q302	VS2SC4738Y/-1		2SC4738Y	AA	R324	VRS-CZ1JF222J	2.2k	1/16W Metal Oxide	AA
	or				R330	VRS-CZ1JF563J	56k	1/16W Metal Oxide	AA
	VS2SC4617B/-1		2SC4617B	AA	R332	VRS-CZ1JF102J	1k	1/16W Metal Oxide	AA
	or				R333	VRS-CZ1JF222J	2.2k	1/16W Metal Oxide	AA
Q303	VS2SC5383F/-1		2SC5383F	AB	R377	VRS-CZ1JF000J	0	1/16W Metal Oxide	AA
	VS2SC4738Y/-1		2SC4738Y	AA	R380	VRS-TV1JD100J	10	1/16W Metal Oxide	AA
	or				MISCELLANEOUS PARTS				
	VS2SC4617B/-1		2SC4617B	AA	P306	QCNCM8082TAZZ		Plug, 80Pin	AK
	or				SC301	QSOCN0925TAN1		Connector, 9Pin	AE
	VS2SC5383F/-1		2SC5383F	AB	SC303	QSOCN1006TAN1		Connector, 10Pin	AE
	VS2SC4738Y/-1		2SC4738Y	AA	SC304	QSOCN0706TAN1		Connector, 7Pin	AE
	or				SC305	QSOCN2071TAZZ		Connector, 20Pin	AD
	VS2SC4617B/-1		2SC4617B	AA	SC306	QSOCN1871TAZZ		Connector, 18Pin	AE
	or				COIL				
	VS2SC5383F/-1		2SC5383F	AB	L301	VPAWM4R7MR70N		Coil, 4.7μH	AC
CAPACITORS					RESISTORS				
C301	VCKYCZ1HB102K	1000p	50V Ceramic	AB	R304	VRS-CZ1JF222J	2.2k	1/16W Metal Oxide	AA
C302	VCKYCZ1HF103Z	0.01	50V Ceramic	AB	R308	VRS-CZ1JF122J	1.2k	1/16W Metal Oxide	AA
C303	VCSATE1AJ336M	33	10V Tantalum	AG	R309	VRS-CZ1JF512J	5.1k	1/16W Metal Oxide	AB
C304	VCKYCZ1AF104Z	0.1	10V Ceramic	AB	R310	VRS-CZ1JF433J	43k	1/16W Metal Oxide	AA
C305	VCCCCY1HH331J	330p	50V Ceramic	AA	R311	VRS-CZ1JF101J	100	1/16W Metal Oxide	AA
C306	VCKYCZ1HB102K	1000p	50V Ceramic	AB					
C307	VCCCCY1HH331J	330p	50V Ceramic	AA					
C308	VCKYCZ1AF104Z	0.1	10V Ceramic	AB					
C309	VCKYCZ1HB102K	1000p	50V Ceramic	AB					
C310	VCKYCZ1HF103Z	0.01	50V Ceramic	AB					
C311	VCKYCZ1HF103Z	0.01	50V Ceramic	AB					
C312	VCKYCZ1HB102K	1000p	50V Ceramic	AB					
C313	VCKYCZ1HB102K	1000p	50V Ceramic	AB					
C314	VCKYCZ1AF104Z	0.1	10V Ceramic	AB					
C315	VCKYCZ1HB102K	1000p	50V Ceramic	AB					
C318	VCKYCZ1HB102K	1000p	50V Ceramic	AB					
C319	VCKYCZ1AF104Z	0.1	10V Ceramic	AB					
C320	VCKYCZ1AF104Z	0.1	10V Ceramic	AB					
C321	VCKYCZ1HB102K	1000p	50V Ceramic	AB					
C322	VCKYCY0JB105K	1	6.3V Ceramic	AC					
C323	VCKYCZ1HB102K	1000p	50V Ceramic	AB					
C324	VCKYCZ1HF103Z	0.01	50V Ceramic	AB					
C327	VCKYCZ1EB472K	4700p	25V Ceramic	AB					
C329	VCSATA1AJ106M	10	10V Tantalum	AC					
C330	VCKYCZ1HF103Z	0.01	50V Ceramic	AB					
C331	VCKYCZ1AF104Z	0.1	10V Ceramic	AB					
C332	VCKYCZ1EB472K	4700p	25V Ceramic	AB					
C333	VCKYCZ1CB822K	8200p	16V Ceramic	AB					
C340	VCCCCZ1HH5R0C	5p	50V Ceramic	AC					
C342	VCCCCZ1HH5R0C	5p	50V Ceramic	AC					
C343	VCKYCZ1AF104Z	0.1	10V Ceramic	AB					
C344	VCKYCZ1AF104Z	0.1	10V Ceramic	AB					
C345	VCKYCZ1AF104Z	0.1	10V Ceramic	AB					

Ref. No.	Part No.	★	Description	Code	Ref. No.	Part No.	★	Description	Code
MECHANISM PARTS					399	MSPRP0185GEZZ		PB Guide SPR.	AC
301	LCHSM0181GEZZ		Main Chassis Ass'y	AQ	401	LX-WZ1071GE02		CW ø 0.7 ø 1.8t0.1	AC
302	MLEVF0539GEFW		Eject Control Lever	AD	402	LX-WZ1104GE06		CW ø 0.7 ø 2.2t0.25	AB
303	MLEVF0502GEFW		Pinch Control Lever	AD	403	LX-WZ1029GE00		CW ø 1.2 ø 3t0.25	AA
304	NGERH3062GEFW		Main Cam	AD	411	LZ-WZ1105GE00		W ø 1.2 ø 2.5t0.13	AA
305	MLEVF0503GEZZ		Shifter Drive Lever Ass'y	AE	412	LZ-WZ1106GE00		W ø 1.2 ø 2.5t0.2	AA
306	MLEVF0505GEFW		Loading Lever	AD	413	XWHJZ12-03025		W ø 1.2 ø 2.5t0.3	AA
307	MARMM0130GEZZ		S Loading Arm Ass'y	AF	414	XWHJZ12-04025		W ø 1.2 ø 2.5t0.4	AA
308	MARMM0131GEZZ		Tu Loading Arm Ass'y	AF	415	XWHJZ12-05025		W ø 1.2 ø 2.5t0.5	AA
309	MLEVF0508GEFW		T Arm Control Lever	AD	420	LX-BZ3202GEFF		Swing Arm Release Lever Fixing Screw	AC
311	LANGG9121GEFW		CAP FPC Stopper	AD	421	LHLDZ2025GEZZ		Intermediate Gear Stopper	AB
312	LANGF9016GEZZ		Intermediate Gear ANG Ass'y	AG	425	LX-BZ0107GEFF		Special Screw M1.2 x L1	AB
313	MARMM0132GEZZ		Swing Arm Ass'y	AG	426	LX-BZ0108GEFF		Special Screw M1.2 x L3.3	AA
314	LANGJ0055GEFW		Mechanism Fixing Angle	AH	428	LX-NZ0102GEFW		S Guide Hexagon Nut	AC
315	LANGJ0054GEFW		Head amp PWB ANG	AE	429	LX-BZ3203GEFF		Type 1 Minuteness Screw M1.4 x L1	AB
324	RDTCH0039GEZZ		Dew Sensor	AD	430	LX-BZ3185GEFN		Special Screw M1.4 x L2	AB
330	CCHSS0050GE03		Sensor FPC Affixing Slide Chassis	AY	431	LX-BZ3135GEFF		Type 2 Minuteness Screw M1.4 x L1	AA
331	LCHSS0050GEZZ		Slide Chassis Ass'y	AN	432	LX-BZ3201GEFF		Special Head Screw M1.4 x L2	AB
332	CPWBH6079GE01		Sensor FPC Ass'y	AV	433	LX-BZ3132GEFF		Special Head Screw M1.4 x L1.5	AA
334	LHLDP0104GEZZ		S-LED Holder	AC	434	LX-BZ3131GEFN		Special Screw M1.4 x L1.6	AA
335	LHLDP0105GEZZ		Tu-LED Holder	AC	435	LX-HZ3089GEFF		S Tight Screw M1.4 x L2	AA
337	LHLDZ0115GEZZ		Sensor FPC Guide	AC	436	LX-HZ3076GEFF		S Tight Screw M1.4 x L3	AA
338	QSW-M0035TAZZ		Down SW	AC	437	LX-HZ3088GEFF		L Motor Installation Screw	AB
339	QTANZ0006GEZZ		Mic Contact SW	AG	438	LX-BZ3225GEFF		Drum Installation Screw	AC
340	RH-PX0180TAZZ		Cassette LED	AE	439	LX-BZ3181GEFN		GR Lock Screw	AD
341	RH-PX0211TAZZY		S/E Sensor	AD	440	LX-HZ3084GEFF		S Tight Screw M1.4 x L4	AC
342	RDTCM0006TAZZ		Reel Sensor	AC	451	LPOLM0065GEZZ		Sup Pole Base Ass'y	AK
344	LANGG9124GEFW		Slide Adjustment ANG	AC	452	LPOLM0066GEZZ		Tu Pole Base Ass'y	AK
345	LANGG9126GEFW		Down Guide	AE	453	CGIDM0158GE03		Drum Base Ass'y	AH
347	TLABH0590GEZZ		Cassette Control Caution Label	AB	454	NROLM0046GEZZ		Guide Roller Ass'y	AM
351	MLEVF0542GEZZ		Tension Arm Ass'y	AG	455	NROLM0045GEZZ		T Roller Ass'y	AK
352	MLEVF0511GEZZ		Tu Guide Arm Ass'y	AG	456	NDAiV1076GEZZ		S Reel Base Ass'y	AM
353	MLEVF0512GEZZ		Brake Shifter Ass'y	AE	457	NDAiV1077GEZZ		Tu Reel Base Ass'y	AK
354	LBNDK3022GEZZ		Tension Band Ass'y	AF	458	MLEVF0526GEZZ		Pinch Lever Ass'y	AP
355	LANGA0073GEZZ		Reel Cover Ass'y	AG	459	NBLTT0016GEZZ		Drive Belt	AD
356	LANGJ0038GEFW		T Spring Hanging ANG	AC	461	RMOTM1080GEZZ		L Motor Ass'y	AQ
357	MLEVP0302GEZZ		Swing Arm Release Lever	AC	462	RMOTV1023GEZZ		Capstan Motor	AY
360	MLEVP0329GEZZ		Eject Lever	AC	463	QSW-R0039GEZZ		Mode SW	AE
361	MLEVP0296GEZZ		Pinch Drive Lever	AB	465	QPWBH5911GEZZ		LM/Mode FPC	AG
362	PGIDM0156GEZZ		Guide Rail	AC	466	PDMP-0032GEZZ		Damper	AF
363	PGIDM0186GEZZ		T Arm Control Lever Stopper	AC	470	DDRMV0069GE03		Drum Ass'y	BZ
364	NGERH1300GEZZ		Intermediate Gear A Ass'y	AE	500	RAMP-0035TAN0		Head Amp PWB Unit	—
365	NGERH1301GEZZ		Intermediate Gear B Ass'y	AE	501	PSLDM3352TAFW		H/A FPC Shield Plate	AX
366	NPLYV0164GEZZ		Intermediate Pulley Ass'y	AC	502	LANGG9125GEFW		Sensor FPC Cover	AC
367	NPLYV0165GEZZ		Center Pulley Ass'y	AC	CASSETTE CONTROL PARTS				
369	NGERH1302GEZZ		AHC Cam	AB	600	CHLDX3093GE01		Cassette Control Ass'y	AT
370	NGERH1303GEZZ		Coupling Gear	AB	601	LHLDX3093GEZZ		Housing Ass'y	AT
371	NGERH1304GEZZ		Sub Cam	AC	602	LANGF9655GEZZ		Top Cover Ass'y	AG
372	NGERH1305GEZZ		S Loading Gear	AC	603	MSPRT0434GEFJ		Lock SPR	AB
373	NGERH1306GEZZ		Tu Loading Gear	AC	604	MSPRT0435GEFJ		UP-SPR	AB
374	MLEVP0333GEZZ		S Main Brake	AC	610	TLABH0589GEZZ		Cassette Control Lock Label	AB
375	MLEVP0309GEZZ		Tu Main Brake	AB	434	LX-BZ3131GEFN		Special Screw M1.4 x L1.6	AA
376	LHLDX1046GEZZ		S Cassette Stay	AC					
377	LHLDZ2024GEZZ		FPC Cover	AB					
381	PGIDP0031GEFW		Tu Pole	AD					
382	PGIDS0046GEFW		T Roller Upper Flange	AE					
383	PGIDS0047GEFW		T Roller Bottom Flange	AE					
384	NSFTL0761GEFW		T Roller Inner	AE					
385	PGIDP0042GEFW		S Guide Sleeve	AD					
386	PGIDM0170GEZZ		Slide Chassis Guide	AC					
390	MSPRD0184GEFJ		Swing Arm Release SPR.	AC					
391	MSPRT0417GEFJ		Main Brake SPR.	AB					
392	MSPRT0436GEFW		T Arm SPR.	AB					
393	MSPRD0178GEFJ		Tu Guide Arm SPR.	AB					
394	MSPRD0179GEFJ		Pinch Lever Return SPR.	AB					
395	MSPRD0180GEFJ		S Pressure SPR.	AB					
396	MSPRD0181GEFJ		Tu Pressure SPR.	AB					
397	MSPRC0220GEFJ		Guide Adjustment SPR.	AA					
398	MSPRC0221GEFJ		Drum Fixing SPR.	AA					

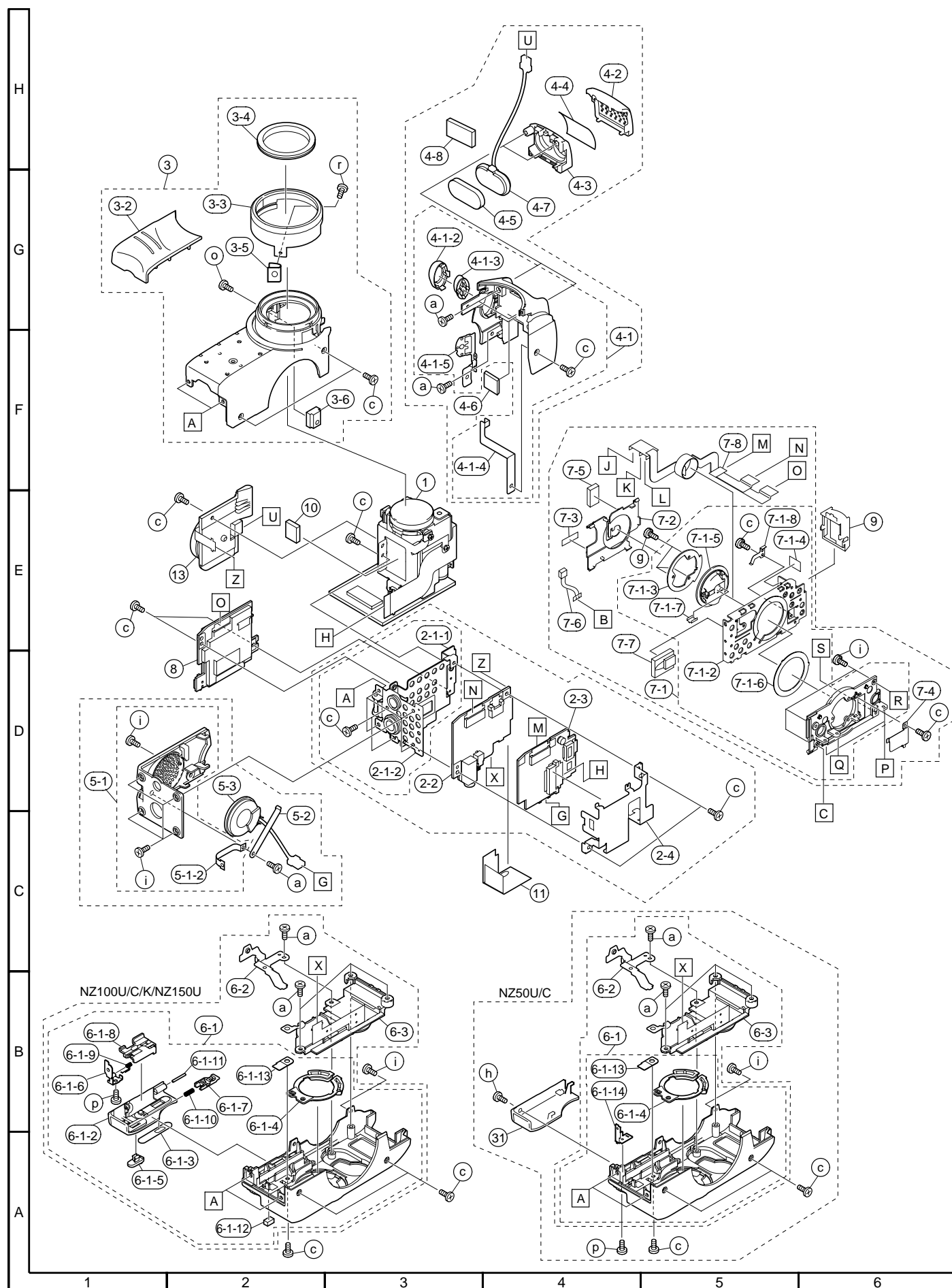
Ref. No.	Part No.	★	Description	Code	Ref. No.	Part No.	★	Description	Code
CABINET PARTS LIST									
1	PLNSA0145TAN2		Lens Unit	BT	7-1-4	PSHEP0252TAZZ		Tilt Insulation Sheet	AA
2-1-1	LANGK0661TAFW		Lens Fixing Angle	AH	7-1-5	PSPAZ0410TAZZ		Tilt Spacer	AF
2-1-2	LANGK0675TAZZ		Tripod Fixing Angle	AL	7-1-6	PSPAZ0411TAZZ		Nolgraido	AF
2-2	DUNTKB189QA00		Camera Head PWB Unit	—	7-1-7	QEARP0333TAFW		Tilt Earth Plate	AB
2-3	DUNTKB190QA00		Audio I/O PWB Unit	—	7-1-8	QEARP0343TAFW		Tilt C Earth Plate	AC
			(NZ100U/C/K/NZ150U)		7-2	LHLDZ1645TAZZ		FPC Holder	AD
2-3	DUNTKB190QA01		Audio I/O PWB Unit	—	7-3	PFLT-0040TAZZ		Wire Fitting Tape	AA
			(NZ50U/C)		7-4	PGiDH0015TAFW		FPC Guide	AC
2-4	PSLDM9194TAZZ		Camera PWB Shield Plate	AC	7-5	PMLT-0249TAZZ		Sound Isolation Spacer B	AA
3	CCABC6118TAK1		KS Camera Front Cabinet	AS	7-6	QCNW-2060TAZZ		Power Cable(2pin)	AD
3-2	GCOVA1835TASA		Front Grip Cover	AG	7-7	QSW-Z0376TAZZ		Turn SW Unit	AF
3-3	GCOVA1868TAKA		Lens Decoration Cover	AG	7-8	CPWBHB195WJ01		Tilt FPC(NZ100U/C/K/	AU
3-4	HINDP0247TASA		Lens Hood Nameplate	AD				NZ150U)	
3-5	LANGK0684TAFW		Decoration Cover Fixing	AD				Tilt FPC(NZ50U/C)	AR
			Angle		8	DUNTKB191PM00		Card PWB Unit	—
3-6	LHLDZ1653TAZZ		Camera Front Cabinet	AC				(NZ100U/C/K/NZ150U)	
			Holder		9	GCOVA1869TAKA		Shoe Cover	AF
4-1	DCOVA1843TAK3		KS Microphone Cover	AQ	10	PMLT-0248TAZZ		Sound Isolation Spacer A	AB
			Service		11	PSHEP0249TAZZ		SP Lead Wire Sheet	AC
4-1-2	GCOVA1872TASA		Still Button Cover	AE				(NZ100U/NZ150U)	
4-1-3	JBTN-0369TASA		Still Button	AG	13	QSW-ZA004WJZZ		Power SW Unit	AW
4-1-4	QEARP0329TAZZ		Microphone Grill Earth	AD	14	CCABA6230TAK3		KS V Frame(NZ100U/C/K)	BD
			Sheet		14	CCABA6230TAK4		KS V Frame(NZ150U)	BD
4-1-5	QEARP0330TAFW		Still Button Earth Plate	AC	14	CCABA6230TAK5		KS V Frame(NZ50U/C)	BD
4-2	HDECA0705TASA		Microphone Grill	AK	14-2	GCOVA1861TAKA		Cassette Lid Decoration	AK
4-3	LHLDZ1640TAZZ		Microphone Holder	AC				Cover	
4-4	PFLT-0039TAZZ		Microphone Spacer	AB	14-3	GCOVA1862TAKA		Cassette Lid Cover	AK
4-5	PMLT-0239TAZZ		Microphone Molt	AB	14-4	GFTAC1318TAKA		Cassette Lid(NZ100U/C/K)	AN
4-6	PMLT-0240TAZZ		Microphone Sound	AB	14-4	GFTAC1319TAKA		Cassette Lid(NZ50U/C)	AN
			Isolation Moil		14-4	GFTAC1320TAKA		Cassette Lid(NZ150U)	AN
4-7	RMiCC0108TAZZ		Microphone Unit	AP	14-5	HBDGB0053TASA		Sharp Badge	AF
4-8	ZTAPEZ800010E		Microphone Lead Wire	AA	14-6	JKNBP0238TASA		Cassette Lid Open Knob	AC
			Tape		14-7	LANGK0669TAZZ		Lid Lock Ass'y	AM
5-1	DCOVA1823TAK1		KS Camera Side Cover	AK	14-8	LSTYM0037TAZZ		Stay L Ass'y	AL
			Service		14-9	LSTYM0038TAZZ		Stay R Ass'y	AR
5-1-2	QEARP0344TAZZ		Speaker Earth Sheet	AB	14-10	PMLT-0253TAZZ		Dust Protection Spacer	AB
5-2	LANGK0513TAFW		Speaker Hold Angle	AC	14-11	PMLT-A004WJZZ		Dust Protection Spacer	AB
5-3	VSP0020P-918N		Speaker	AL	14-12	PSPAG0138TA00		Floating Rubber	AC
6-1	DCABD6126TAK1		KS Camera Rear Cabinet	AP	14-13	TLABH0458TAZZ		Lithium Exchange Label	AC
			Service(NZ50U/C)		15	CANGK0651TA02		KS Radiation Angle	AH
6-1	DCABD6128TAK1		KS Camera Rear Cabinet	AT	15-2	PSHEP0234TAZZ		Radiation Sheet	AC
			Service(NZ100U/C/K/150U)		15-3	TLABS0085TAZZ		Fuse Label	AC
6-1-2	GFTAS1018TAKA		Card Lid(NZ100U/C/K/	AH				(NZ50U/NZ100U/NZ150U)	
			NZ150U)		16-1	CCOVA1863TAK1		KS Terminal Side Cover	AM
6-1-3	GMADi0038TASA		Card Lid Window(NZ100U/	AD				(NZ100U/NZ150U)	
			C/K/NZ150U)		16-1	CCOVA1864TAK1		KS Terminal Side Cover	AM
6-1-4	JBTN-0368TASA		Camera Operation Button	AE				(NZ50U)	
6-1-5	JKNBP0233TASA		Card Lid Knob(NZ100U/C/	AC	16-1-2	GCOVA1866TASA		LED Cover	AC
			K/NZ150U)		16-1-3	TLABH0555TAZZ		Caution Label	AB
6-1-6	LANGK0659TAZZ		Card Lid Shaft Angle	AE				(NZ50U/NZ100U/NZ150U)	
			(NZ100U/C/K/NZ150U)		16-2	DUNTKB246PM00		DC Jack PWB Unit	—
6-1-7	LHLDZ1641TA00		Card Lid Lock(NZ100U/C/	AC	16-3	GCOVH1297TASA		AV Terminal Cover	AF
			K/NZ150U)		16-4	LANGK0683TAFW		AV Terminal Fixing Angle	AF
6-1-8	LHLDZ1642TAZZ		Card Lid Lock Holder	AC	17	CCABB6268TAK3		KS LCD Cabinet(NZ50U/C)	AV
			(NZ100U/C/K/NZ150U)		17	CCABB6263TAK3		KS LCD Cabinet	AV
6-1-9	MSPRD0089TAFJ		Card Lid Shaft Spring	AB				(NZ100U/C/K/NZ150U)	
			(NZ100U/C/K/NZ150U)		17-2	GCOVA1827TAKA		LCD Mask	AL
6-1-10	MSPRT0064TAFJ		Card Lid Knob Spring	AA	17-3	GCOVA1828TAZZ		R/C Light Reception Cover	AD
			(NZ100U/C/K/NZ150U)		17-4	HBDGB0063TASA		Sharp Badge	AG
6-1-11	NSFTZ0178TAFW		Card Lid Shaft(NZ100U/C/	AA	17-5	JBTN-0370TASA		VCR Operation Button	AC
			K/NZ150U)		17-6	PSPAZA0027WJZZ		Covering spacer	AB
6-1-12	PMLT-0241TAZZ		Card Lid Spacer(NZ100U/	AA	17-7	PTEH0077TAZZ		LCD Mask Fitting Tape	AE
			NZ150U)		17-8	QEARP0332TAFW		VCR Operation Earth Plate	AD
6-1-13	PMLT-0242TAZZ		Operation Button Blindfold	AC	18-1	DCOVA1865TAK1		Battery Cover Service	AN
			Spacer		18-1-2	JBTN-0367TASA		Battery Detection Switch	AC
6-1-14	LANGK0685TAFW		Rear Grip Cover Fixing	AD				Button	
			Angle(NZ50U/C)		18-1-3	JKNBP0235TASA		Battery Lock Knob	AC
6-2	LANGK0660TAFW		Rear Cabinet Fixing Angle	AD	18-1-4	LANGK0667TAFW		Battery Lock Fixing Angle	AD
6-3	QSW-ZA003WJZZ		Camera Operation Unit	AY	18-1-5	MSPRC0152TAFJ		Battery Lock Spring	AA
7-1	DCOVA3126TA01		Tilt Frame V Service	AY	18-1-6	MSPRP0229TAFW		Battery Detection Switch	AC
7-1-2	LANGK0665TAFW		Tilt Frame C	AK				Button Spring	
7-1-3	LANGK0666TAFW		Stopper Angle	AC	18-1-7	PMLT-0252TAZZ		Blindfold Sheet	AB
					18-2	QTANZ0152TAZZ		Battery Terminal Unit	AN
					19-1	CANGK0652TA01		KS LCD Earth Plate	AF
					19-1-1	LANGK0652TAFW		LDC Earth Plate	AE

Ref. No.	Part No.	★	Description	Code	Ref. No.	Part No.	★	Description	Code
19-1-2	PSHEP0228TAZZ		LCD Insulation Sheet	AB	SUPPLIED ACCESSORIES				
19-2	CHLDZA005WJ01		KS LCD Holder	AF	ACCESSORIES				
19-2-1	LHLDZA005WJZZ		LCD Holder	AE	⚠	QACCZ0053TAPZ		AC Cable(NZ100K)	AP
19-2-2	PSHEP0233TAZZ		LCD Fitting Sheet	AB		QCNW-A338WJZZ		USB Cable (NZ100U/C/K/NZ150U)	AL
19-3	KLMPV0061TAZZ		Lamp Unit	AS	⚠	QCNW-1979TAZZ		AV Cable	AK
19-4	PGIDM0037TAZZ		Light Guide Plate	AG		RRMCG0084TASA		Remote Control (NZ100U/C/K/NZ150U)	AN
19-5	PMIR-0021TAZZ		Reflection Sheet	AC	⚠	UADP-0341TAZZ		AC Adapter(NZ100K)	AZ
19-6	PSHEP0044TAZZ		Prism Sheet	AG		UADP-0339TAZZ		AC Adapter (NZ50U/C/NZ100U/C/NZ150U)	AY
19-7	PSHEP0045TAZZ		Diffusion Sheet	AD		UBATi0086TAZZ		Battery Pack	BE
19-8	PSHEP0259TAZZ		Insulation Sheet	AC		UBATi0089TAZZ		Battery Pack(NZ150U)	BE
19-9	RLCDV0069TAZZ		LCD Panel	BT		UBATL0011TAZZ		Lithium Battery	AE
20	DUNTKB187QA00		Main PWB Unit (NZ100U/C)	—		UBATU0013TAZZ		AA Battery(X2) (NZ100U/C/K/NZ150U)	
20	DUNTKB187QA01		Main PWB Unit (NZ50U/C)	—		GCOVH1296TASA		Lens Cap	AF
20	DUNTKB187QA02		Main PWB Unit (NZ100K)	—		GCOVA1870TASA		Lens Hood	AH
20	DUNTKB187QA03		Main PWB Unit (NZ150U)	—		GDAl-A001WJZZ		Tripod Adapter	AM
21	DUNTKB192QA00		Inverter PWB Unit	—		UBNDT0145TASA		Hand Strap	AG
22	DUNTKB193PM00		VCR Operation Unit	—		CDSKA0080TA01		SD Card(8MB) (NZ100U/C/K)	BF
23	CPWBH2876TA01		H/A PWB=Main PWB FPC	AS		CDSKA0082TA01		SD Card(16MB)(NZ150U)	BF
24	LANGK0668TAFW		Lid Lock Catch Angle	AE		CDSKA0081TA01		CD-ROM(NZ100U/C/K/ NZ150U)	AH
25	PSHEPA006WJZZ		Insulation Sheet	AC		TiNS-6072TAZZ		Operation Manual (NZ100K)	AR
26	QPWBHB196WJZZ		Inverter PWB=Main PWB FPC	AD		TiNSE0442TAZZ		Operation Manual (NZ100U/NZ150U)	AL
27	QPWBHB197WJZZ		VCR Operation=Main PWB FPC	AD		TiNSE0443TAZZ		Operation Manual(NZ50U)	AL
28	GCOVA1867TAKA		Adjustment Connect Cover	AF		TiNSL0324TAZZ		Operation Manual(NZ50C)	AR
29	LHLDB1028TASA		Lithium Holder	AD		TiNSL0325TAZZ		Operation Manual (NZ100C)	AS
30	TLABM2281TAZZ		Model Label(NZ100U)	AC	ACCESSORIES				
30	TLABM2282TAZZ		Model Label(NZ50U)	AC	(NOT REPLACEMENT ITEM)				
30	TLABM2283TAZZ		Model Label(NZ50C)	AD	TGANE0044TAZZ		Guarantee Card (NZ50U/NZ100U/NZ150U)	—	
30	TLABM2284TAZZ		Model Label(NZ100C)	AD	TGANZ0021TAZZ		Guarantee Card (NZ50C/NZ100C)	—	
30	TLABM2285TAZZ		Model Label(NZ100K)	AE	TGANZ0022TAZZ		Guarantee Card(NZ100K)	—	
30	TLABM2286TAZZ		Model Label(NZ150U)	AC	TLABK0001TAZZ		No. Card(x2)	—	
31	GCOVA1874TASA		Rear Grip Cover (NZ50U/C)	AF	PACKING PARTS				
a	LX-HZ0050TAFN		M1.7-4 N	AA	(NOT REPLACEMENT ITEM)				
c	XiPSN17P03000		M1.7-3 N	AA	SPAKC7692TAZZ		Packing Case(NZ100U/C)	—	
d	LX-BZ0221TAFN		M1.7-2 ROC	AB	SPAKC7693TAZZ		Packing Case(NZ50U/C)	—	
e	XiPSN17P02000		M1.7-2 N	AA	SPAKC7697TAZZ		Packing Case(NZ100K)	—	
g	LX-BZ0238TAFN		M1.7-6 N with Washer	AC	SPAKC7698TAZZ		Packing Case(NZ150U)	—	
h	XiPSF17P02000		M1.7-2 F	AA	SPAKA6421TAZZ		Packing Add. (NZ50U/C/NZ100U/C/NZ150U)	—	
i	XiPSF17P03000		M1.7-3 F	AA	SPAKA6420TAZZ		Packing Add.(Bottom)	—	
k	LX-BZ0251TAFD		Floating Screw A	AB	SPAKF0293TAZZ		Packing Material(Bottom)	—	
m	LX-BZ0253TAFN		Floating Screw B	AB	SPAKF0296TAZZ		AC Adapter Pad (NZ50U/C/NZ100U/C/NZ150U)	—	
o	XiPSN17P06000		M1.7-6 N	AA	SPAKP6108TAZZ		Side Pad	—	
p	LX-HZ0063TAFN		M1.7-6 N Tapping	AA	SPAKP6121TAZZ		Wrapping Paper	—	
q	LX-HZ0050TAFN		M1.7-4 F	AA	SSAKA0087TAZZ		Plastic Bag	—	
r	XiPSN17P04000		M1.7-4 N	AA					
t	LX-BZ0224TAFN		M1.7-2.5 N	AA					
u	LX-BZ3201GEFF		M1.4-2 F	AB					
CAMERA UNIT PARTS LIST									
1	PFIW0084TAZZ		Crystal Filter	AS					
2	PCOVM8033TA00		Dust Protection Rubber	AC					
3	CLNS-0145RMAJ		CCD Service	BH					
4	LX-HZ0073TAFD		M1.7 X 5 Tap	AA					
5	DUNTKB188PM00		CCD PWB Unit	—					
6	XiPSN17P02000		M1.7 X 2 Small Screw (Silver)	AA					
7	PSLDM3375TAMS		Shield Case	AD					
8	QPWBHB194WJZZ		CCD=Camera FPC	AD					
9	LANGK0662TAFW		Lens Fixing Angle	AG					
10	LX-HZ0050TAFN		M1.7-4 N	AA					
11	PLNSA0145TAN2		Lens Unit	BT					

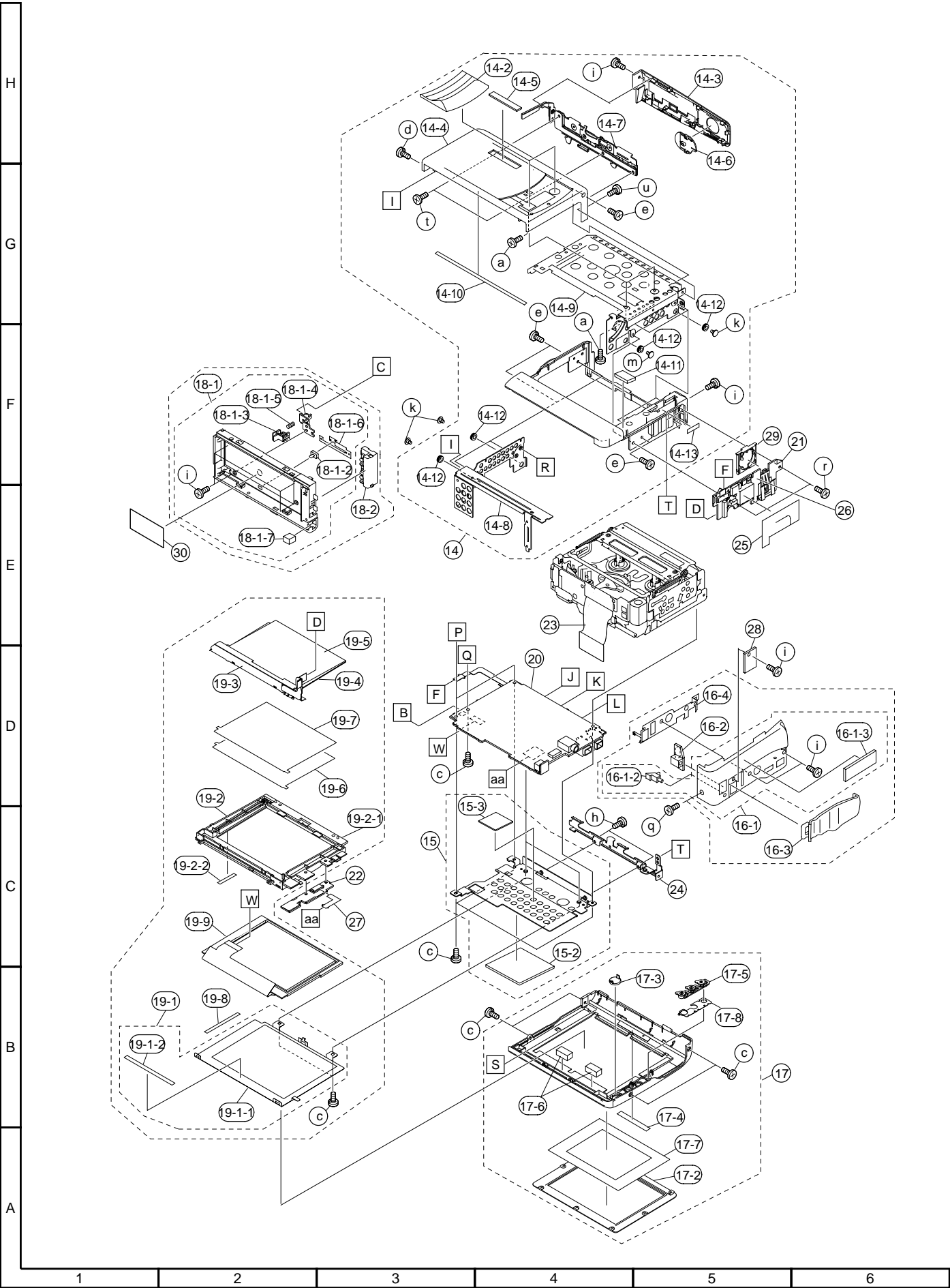
MECHANISM CHASSIS EXPLODED VIEW



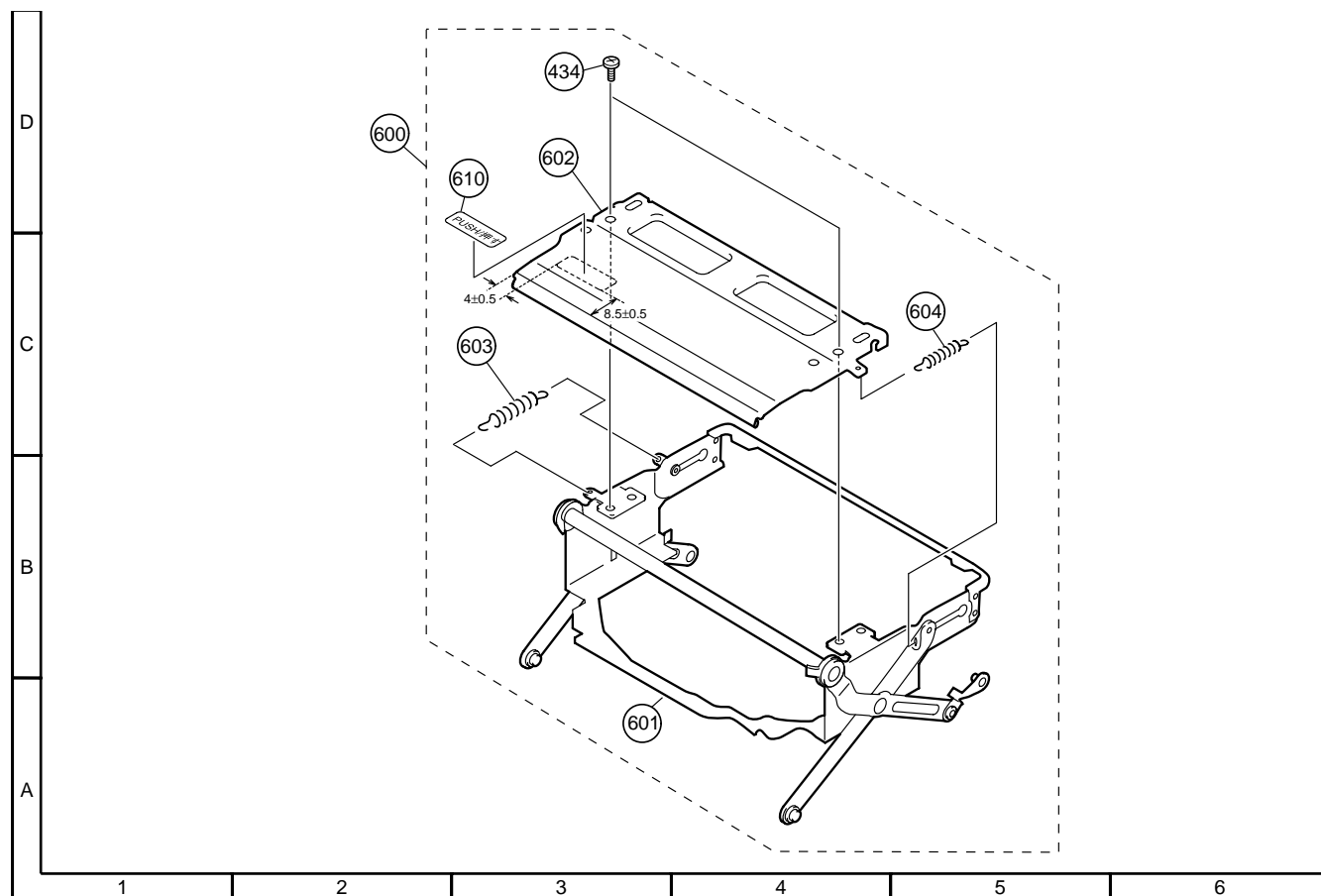
LENS UNIT EXPLODED VIEW



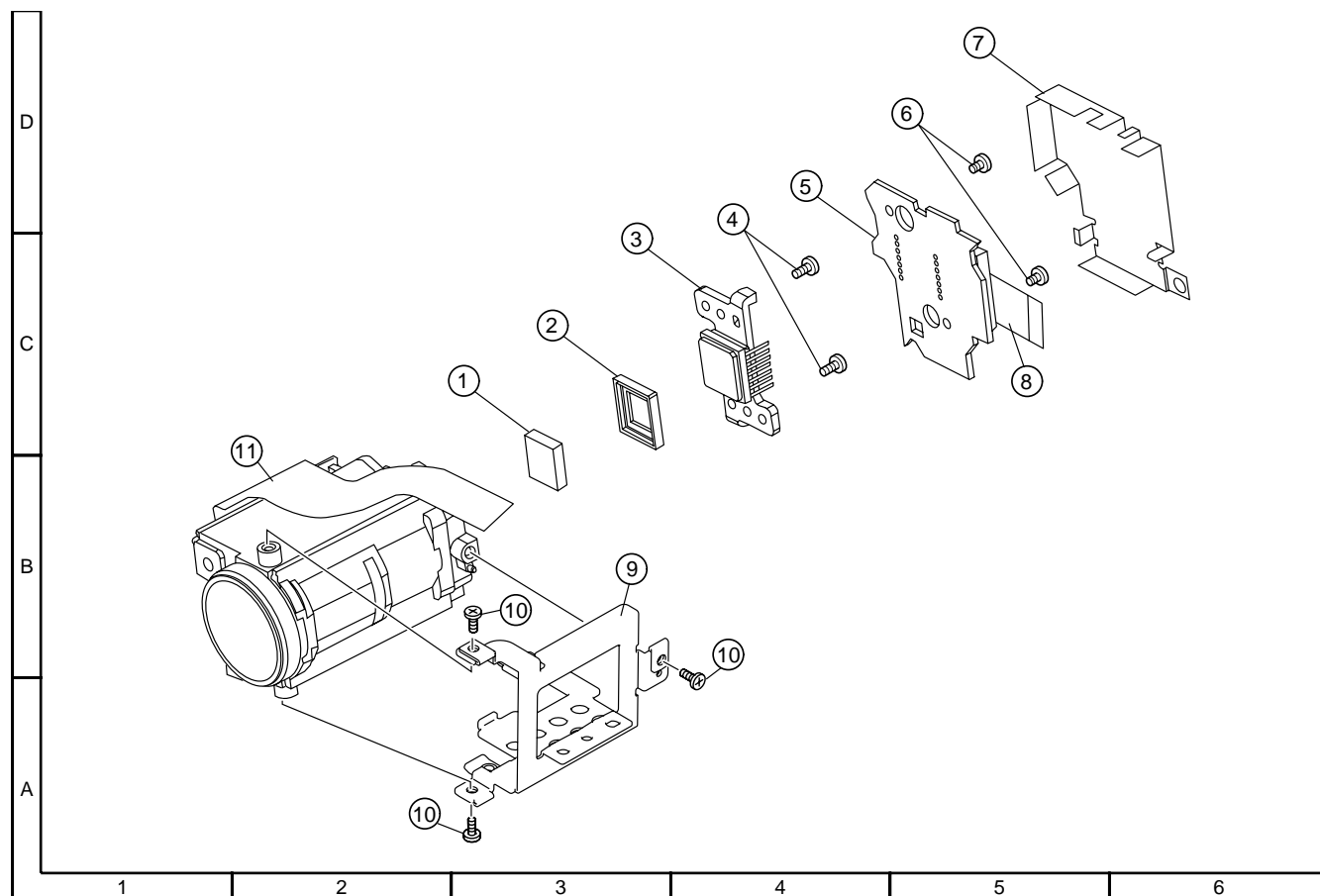
VL-NZ50U/NZ100U
VL-NZ150U
CABINET EXPLODED VIEW



CASSETTE CONTROL EXPLOOD VIEW



CAMERA UNIT EXPLOOD VIEW



VL-NZ50U/NZ100U/NZ150U SERVICE JIG SPECIFICATIONS

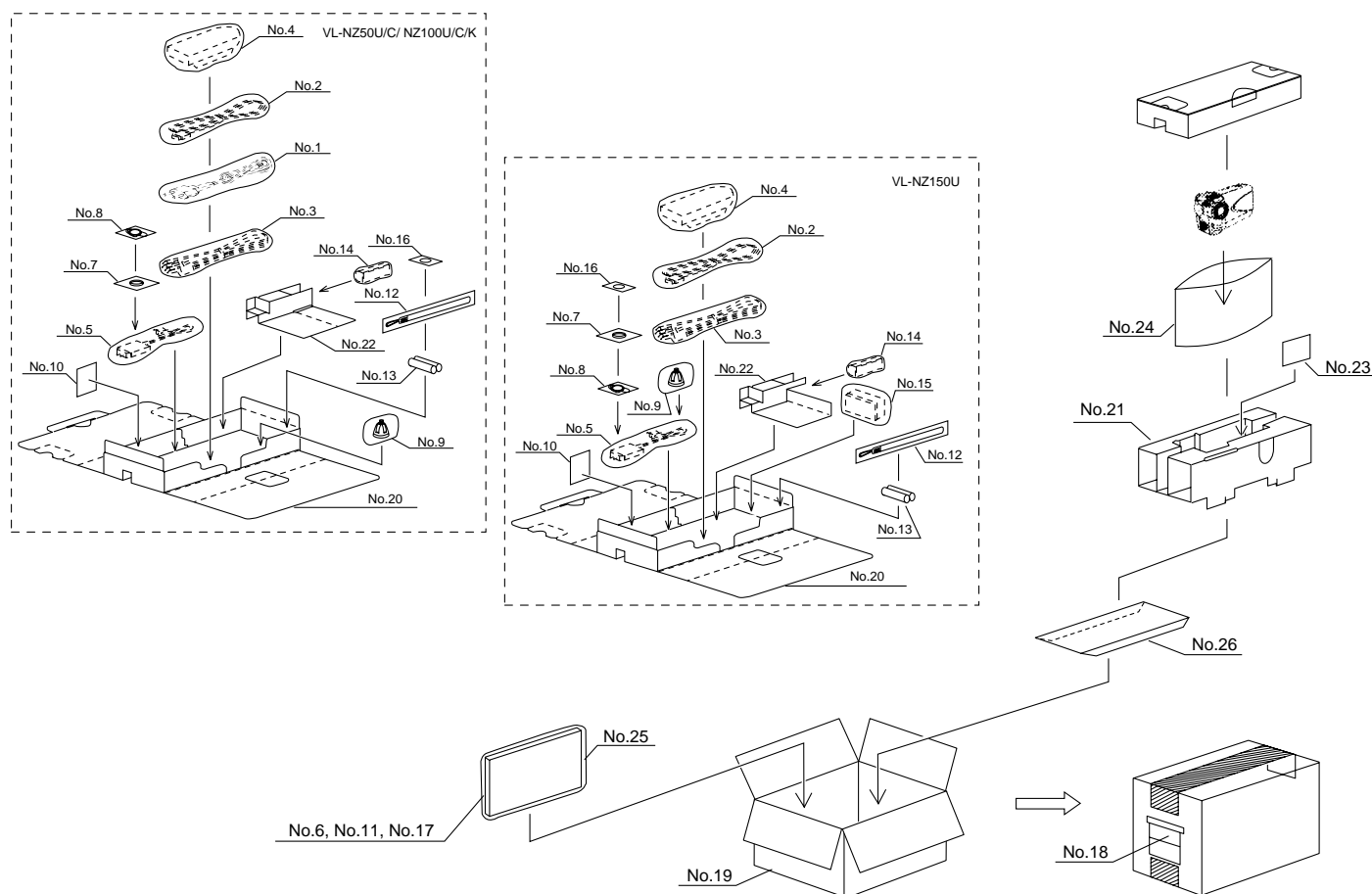
1-1. Adjusting jigs for checking the mechanism

No.	Name	New part	Type number, Application	Part code	Code
1	PB-use cassette torque meter		1mN·m/1.5mN·m	9DASD-1015	DB
2	Torque gauge		For use in VS-REW take up torque adjustment	JiGTG0045	CN
3	Torque gauge head		For use with the above torque gauge	9EQTGH-DH5000	BW
4	Tension gauge 4N		For measuring of pinch roller pressure	JiGSG0400	BK
5	Dial tension gauge		PTG-10	9DAPTG-10-10W	CA
6	Torque screwdriver 150mN·m		No. 0 cross bit, No. 00 cross bit	JiGTD1500RTDH	CB
7	Master plane		For checking the reel base height	9EQMP-VLPD1	CL
8	Height adjustment jig		For height adjusting	9DAHG-PD1	BZ
9	Height adjustment screwdriver		For guide roller adjustment. For Tu guide adjustment. For T roller adjustment. Bit shape.	9EQDRIVER-DH5	BC
10	Alignment tape - I		For tape running adjustment	VR3-GAZXS	CF
11	Alignment tape - II		For Switching Point adjustment	VR3-GTZQS	CG
12	For hexagon nut opposite side 3mm bit		For S guide hexagon nut installation.	95CM22001	BL
13	Reel hub for back tension measurement		Refer to Service Manual.	Prepared in the service station.	—
14	String for measuring the pinch roller pressure		Refer to Service Manual.	Prepared in the service station.	—

1-2. Parts for periodical inspection and maintenance

No.	Name	New part	Type number, Application	Part code	Code
1	Oil		Cosmo Hydro HV22	9EQ-Oil-HV22	AE
2	Cleaning paper		Dusper Σ (SIGMA) ozu Co., LTD	JiGDUSPER	AP
3	Grease: Moly Coat YM-103		Dow corning	99FGREASE-YM103	AH

18. PACKING OF THE SET



ACCESSORIES

No.	Model	Parts Code	Description	Remarks
1	NZ100K	QACCZ0053TAPZ	AC Cable	⚠
2	NZ100U/C/K/NZ150U	QCNW-A338WJZZ	USB Cable	
3	– Common parts –	QCNW-1979TAZZ	AV Cable	
4	NZ100U/C/K/NZ150U	RRMCG0084TASA	Remote Control	
5	NZ100K	UADP-0341TAZZ	AC Adapter	⚠
	NZ50U/C/NZ100U/C/NZ150U	UADP-0339TAZZ	AC Adapter	⚠
6	NZ100U/C/K/NZ150U	CDSKA0081TA01	CD-ROM	
7	– Common parts –	GCOVH1296TASA	Lens Cap	
8	– Common parts –	GCOVA1870TASA	Lens Hood	
9	– Common parts –	GDAi-A001WJZZ	Tripod Adapter	
10	NZ100U/C/K	CDSKA0080TA01	SD Card(8M)	
	NZ150U	CDSKA0082TA01	SD Card(16M)	
11	NZ100K	TiNSL0324TAZZ	Operation Manual	
	NZ100U/NZ150U	TiNSE0442TAZZ	Operation Manual	
	NZ50U	TiNSE0443TAZZ	Operation Manual	
	NZ50C	TiNSL0324TAZZ	Operation Manual	
	NZ100C	TiNSL0325TAZZ	Operation Manual	
12	– Common parts –	UBNDT0145TASA	Hand Strap	
13	NZ100U/C/K/NZ150U	UBATU0013TAZZ	AA Battery(x2)	
14	– Common parts –	UBATI0086TAZZ	Battery Pack	
15	NZ150U	UBATI0089TAZZ	Battery Pack	
16	– Common parts –	UBATL0011TAZZ	Lithium Battery	

ACCESSORIES (NOT REPLACEMENT ITEM)

No.	Model	Parts Code	Description	Remarks
17	NZ50U/NZ100U/NZ150U	TGANE0044TAZZ	Guarantee Card	★
	NZ50C/NZ100C	TGANZ0021TAZZ	Guarantee Card	★
	NZ100K	TGANZ0022TAZZ	Guarantee Card	★
18	– Common parts –	TLABK0001TAZZ	No. Card(x2)	★

PACKING PARTS (NOT REPLACEMENT ITEM)

No.	Model	Parts Code	Description	Remarks
19	NZ100U/C	SPAKC7692TAZZ	Packing Case	★
	NZ50U/C	SPAKC7693TAZZ	Packing Case	★
	NZ100K	SPAKC7697TAZZ	Packing Case	★
	NZ150U	SPAKC7698TAZZ	Packing Case	★
20	NZ50U/C/NZ100U/C/NZ150U	SPAKA6421TAZZ	Packing Add.	★
21	– Common parts –	SPAKA6420TAZZ	Packing Add. (Bottom)	★
22	NZ50U/C/NZ100U/C/NZ150U	SPAKF0296TAZZ	AC Adapter Pad	★
23	– Common parts –	SPAKP6108TAZZ	Side Pad	★
24	– Common parts –	SPAKP6121TAZZ	Wrapping Paper	★
25	– Common parts –	SSAKA0087TAZZ	Plastic Bag	★
26	– Common parts –	SPAKF0293TAZZ	Packing Material(Bottom)	★

MARK ★ Not Replacement Item

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